

Progress in International Reading Literacy Study



# PIRLS 2006

## Summary Report on the Reading Literacy of 10-year-old Students in Hungary



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**Summary Report on the Reading Literacy**  
**of 10-year-old Students in Hungary**

Educational Authority  
Budapest, 2008

Organizing the assessment and reporting the results of PIRLS is delegated to the Educational Authority,  
Department of Assessment and Evaluation by the Ministry of Education and Culture in Hungary.

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# Introduction

In today's information society, literacy ability is essential for maximizing success in the endeavours of daily life, continuing intellectual growth, and realizing personal potential. Similarly, a literate citizenry is vital to a nation's social growth and economic prosperity. To help countries make informed decisions about reading education, IEA's Progress in International Reading Literacy Study (PIRLS) provides internationally comparative data about students' reading achievement at 4<sup>th</sup>-grade of primary school. This age and grade is an important transition point in children's development as readers, because most of them have already learned to read, and do not read solely for the sake of practicing, but to gain more knowledge and to learn.

IEA (International Association for the Evaluation of Educational Achievement) is an independent international cooperative of national research institutions and governmental agencies with a permanent secretariat based in Amsterdam, the Netherlands. For the past 50 years, IEA has been conducting large-scale comparative studies of educational achievement to gain a deeper understanding of the effects of policies and practices within and across systems of education internationally.

IEA and the TIMSS & PIRLS International Study Center at Boston College, which is responsible for the coordination of PIRLS, set the framework and specifications of the study in cooperation with renowned researchers. PIRLS measures students' reading literacy every five years together with the background factors related to it. The first data collection was in 2001. Within each participating country the NRC (National Research Coordinator) and the National Centre under its control is responsible for conducting PIRLS. In Hungary, the National Centre is the Department of Assessment and Evaluation at the Educational Authority. With a different name and institution (formerly known as the Center for Evaluation Studies of KÁOKSZI and sulíNova Kht.), however, it was the same group of experts who conducted both cycles of PIRLS.

This report provides a short overview of the PIRLS 2006 assessment results<sup>1</sup>, and compares those with the relevant findings of the PIRLS 2001 study pointing out the positive or negative changes that occurred during the five years in Hungary. While providing a comprehensive review on the achievements of the 4<sup>th</sup>-grade students, it also shows their comprehensive abilities with regard to different reading purposes and different processes of comprehension required for the tasks, and it also analyses the gender differences in reading achievement. Finally, it describes some of the school and family related background factors measured by the PIRLS study, which are especially important with regards to the 4<sup>th</sup>-grade students' reading abilities.

The aim of this volume is to present those results and background factors that we deem the most important findings of the study. There will be a more thorough analysis of the study available in the "PIRLS 2006 National Report" to be published in the spring of 2008.

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<sup>1</sup> The source of the data and charts in this volume is the PIRLS 2006 International Report. Mullis, I. V. S. et al.: PIRLS 2006 International Report. Chestnut Hill, MA: Boston College, 2007; and also the PIRLS 2006 international database.





## What is PIRLS?

The PIRLS 2006 is the second cycle of IEA's international reading literacy studies. The first cycle of the data collection for assessment was conducted in 2001 with the participation of 35 countries<sup>1</sup>, and is to be repeated every five years. The aim of PIRLS is to measure regularly students' reading literacy, to follow the changes over time and to reveal the background factors influencing students' reading achievement.

By PIRLS 2006 the number of the participating countries increased. The first diagram shows the 40 countries and 5 Canadian provinces participating in PIRLS 2006<sup>2</sup>.

Though the PIRLS test strives to measure students of the same age and grade, this often causes difficulties since entry age of compulsory schooling varies in different countries. The IEA's researchers marked 4th-grade students as the target group of the study. Accordingly, the research was carried out using a randomly chosen representative sample of 4th-grade students in most countries. However, exceptions were made in some countries where the average age of the 4th-grade students was below 9.5. Also, there have been other examples of exception. In Slovenia, for instance, 3rd-grade students were also assessed because the country's education system reform introducing an earlier school-entry age has not been completed yet, and thus some of the students were in the 3-year-term while others were in the 4-year-term primary schooling. Because of an early school-entry age, 5th-grade students were assessed for the research in the following four countries: England, Scotland, New-Zealand and Trinidad & Tobago. 5th-grade students participated in the research in two other countries (South Africa & Luxembourg), because the native language and the language of instruction are different for most of the students in these countries.

Due to the difference in school-entry age, the average age of the assessed students is also not the same in each country. In most of the countries children begin school at the age of 6 or 7, so the average age of the assessed students is accordingly between 9.7 and 10.6. In some of the countries, especially in Eastern Europe, children begin school at 7, so their average age is also higher (10.7 to 11 years). The average age is even higher in South Africa and Luxembourg because of the above mentioned reasons. However, no connection can be established between the high average age and the average reading achievement results; there are high average student age as well as low average student age among the countries with outstanding results and the same can be said about the countries performing weakly. It seems that other factors in the education system have more influence over the results in PIRLS 2006 than student age at the time of the assessment.

The IEA and the TIMMS & PIRLS International Research Center defined the concept of reading literacy in the PIRLS studies and the characteristics of the items used to assess reading literacy in the volume entitled "The PIRLS 2006 assessment framework and specifications"<sup>3</sup>. When selecting the areas to be measured in the PIRLS study, the researchers defined reading literacy – in accordance with IEA's former studies – as use and comprehension of those written texts which are important for the individual and the society. Literacy of the 10-year-old students is "the ability to understand and use written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment."

<sup>1</sup> Argentina, Belize, Bulgaria, Canada Ontario, Canada Quebec, Columbia, Cyprus, Czech Republic, England, France, Germany, Greece, Hong-Kong, Hungary, Iceland, Iran, Israel, Italy, Kuwait, Latvia, Lithuania, Luxembourg, Macedonia, Moldavia, Morocco, New Zealand, Norway, Romania, Russia, Scotland, Singapore, Slovakia, Slovenia, Sweden, The Netherlands, Turkey, United States.

<sup>2</sup> Austria, Belgium (Flemish), Belgium (French), Bulgaria, Canada Alberta, Canada British Columbia, Canada Nova-Scotia, Canada Ontario, Canada Quebec, Denmark, England, France (including French Guinea), Georgia, Germany, Hong-Kong, Hungary, Iceland, Indonesia, Iran, Israel, Italy, Kuwait, Latvia, Lithuania, Luxembourg, Macedonia, Moldavia, Morocco, New Zealand, Norway, Poland, Qatar, Russia, Scotland, Singapore, Slovakia, South African Republic, Spain, Sweden, Taiwan, The Netherlands, Trinidad and Tobago, United States.

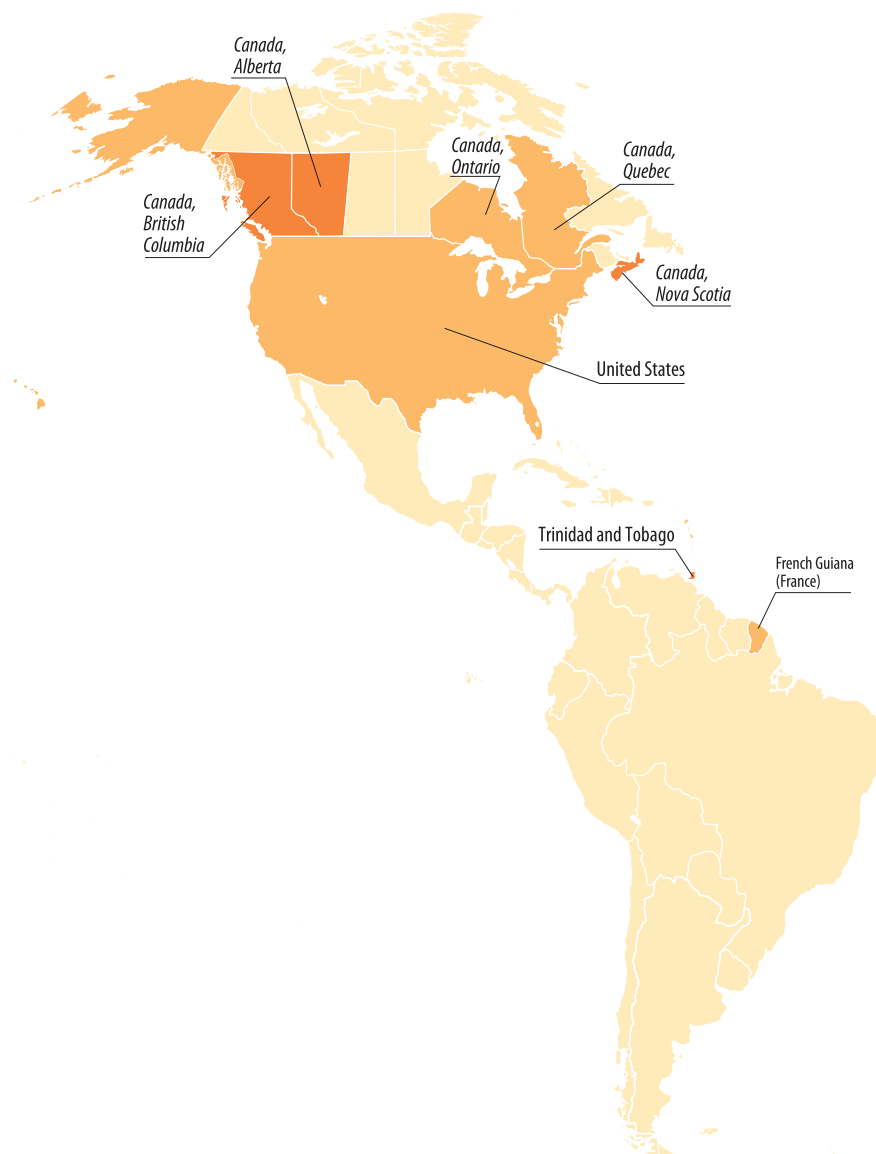
There is no central educational authority in Canada, each province has their own educational control, which can be very different. Out of the 10 provinces and 5 territories only 5 provinces took part in the 2006 PIRLS study, so for their own request the results have been presented separately for the provinces.

<sup>3</sup> Mullis, I. V. S. et al.: *PIRLS 2006 assessment framework and specifications*. 2nd edition. Chestnut Hill, MA: Boston College, 2006.

## Countries Participating in PIRLS 2006

## 2006 and 2001

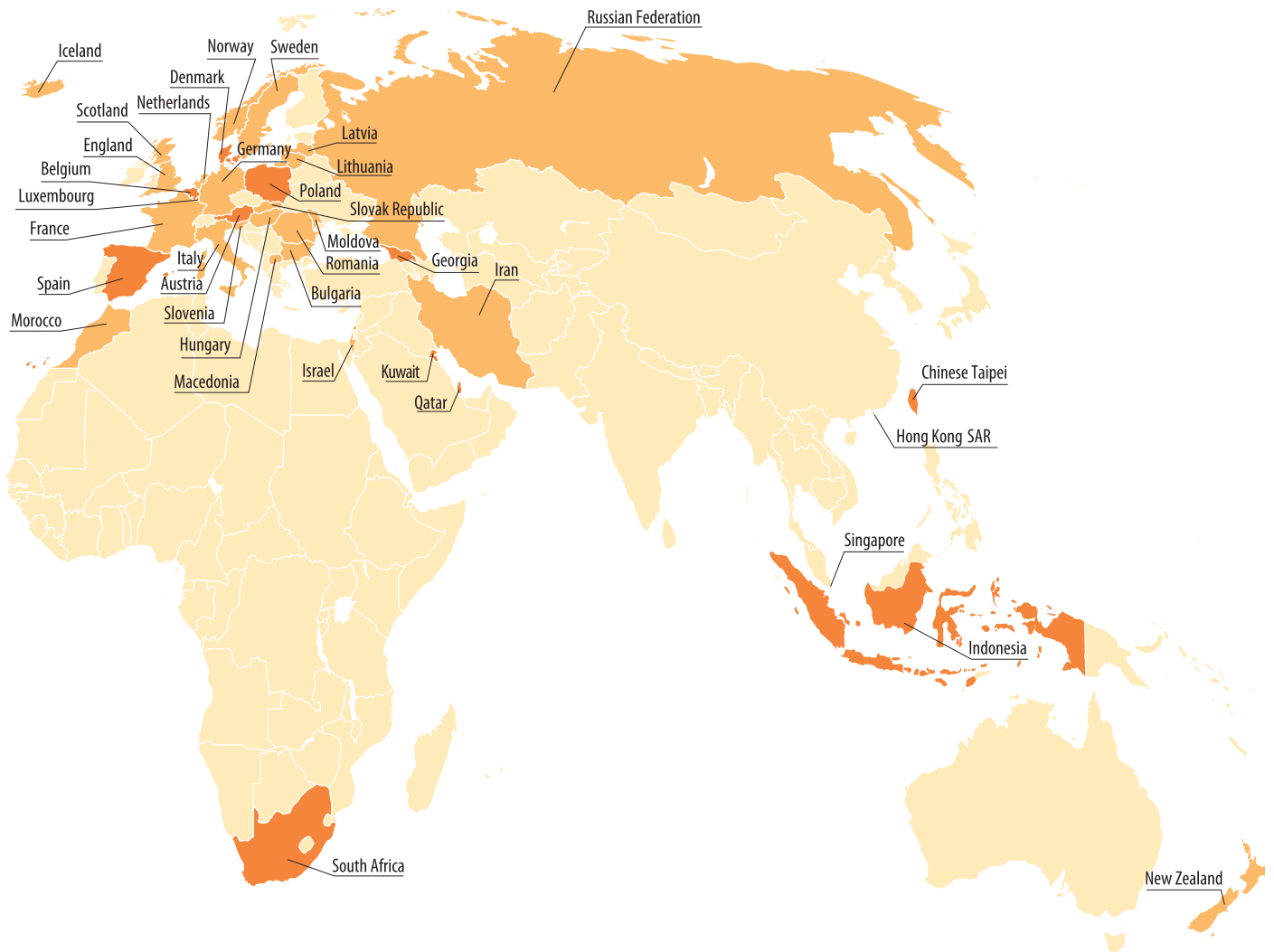
Bulgaria  
 Canada, Ontario  
 Canada, Quebec  
 England  
 France  
 Germany  
 Hong Kong SAR  
 Hungary  
 Iceland  
 Iran, Islamic Rep. of  
 Israel  
 Italy  
 Latvia  
 Lithuania  
 Macedonia, Rep. of  
 Moldova, Rep. of  
 Morocco  
 Netherlands  
 New Zealand  
 Norway  
 Romania  
 Russian Federation  
 Scotland  
 Singapore  
 Slovak Republic  
 Slovenia  
 Sweden  
 United States



## 2006

Austria  
 Belgium (Flemish)  
 Belgium (French)  
 Canada, Alberta  
 Canada, British Columbia  
 Canada, Nova Scotia  
 Chinese Taipei  
 Denmark  
 Georgia  
 Indonesia  
 Kuwait  
 Luxembourg  
 Poland  
 Qatar  
 South Africa  
 Spain  
 Trinidad and Tobago

## Countries Participating in PIRLS 2006 (Continued)



In PIRLS 2006 design, ten passages accompanying with 126 items were distributed across 13 test booklets<sup>4</sup>. One passage and the accompanying items can be found in different booklets. Each student booklet consists of two 40-minute blocks of passages and items. Each student responds to one assessment booklet..

Along with the assessment booklets, the students were also asked to complete a short 20-minute student questionnaire, in which they had to answer questions exploring their social, economic and cultural status, reading habits and experience in order to help us discover more about the background factors which are directly linked to their reading literacy. Similar background questionnaires were given to the parents, the school principals and the reading teachers. Teacher Questionnaire asks teachers about activities for teaching reading and classroom management.

When selecting the tasks for the study's test booklets, the researchers chose passages with different reading purposes and various question formats, to enable test takers to demonstrate their reading comprehension..

The PIRLS assessment of reading literacy focuses on the two main purposes for reading: reading for literary purposes and reading to acquire and use information (from now on literary and informational passages).

The literary passages are short stories or parts of a longer narrative fiction – possibly with illustrations. The five different passages applied in the test demonstrate five different situations in life, all of which have two main characters and their plot evolves around one or two key events. While answering the related questions, students should identify the plot and the characters' actions, feelings, attitudes and ways of thinking along with the style of the passages.

The informational passages deal with real world and are about different subjects. Among the five passages there are geographical, biographical and instructional ones and also some about natural science. They contain illustrations, photos and elements that are unlikely to be found in literary texts like maps, texts boxes, lists and charts, which facilitate comprehension or provide further information.

The questions can be put into four categories based on the processes of comprehension needed to solve them:

1. Focus on and retrieve explicitly stated information:

- identifying information that is relevant to the specific goal of reading;
- looking for specific ideas;
- searching for definitions of words or phrases;
- identifying the setting of a story (e.g., time, place)
- finding the topic sentence or main idea (when explicitly stated).

2. Make straightforward inferences:

- inferring that one event caused another event;
- concluding what is the main point made by a series of arguments;
- determining the referent of a pronoun;
- identifying generalizations made in the text;
- describing the relationship between two characters.

3. Interpret and integrate ideas and information:

- discerning the overall message or theme of a text;
- considering an alternative to actions of characters;

<sup>4</sup> Four of the passages used in the test have been published – with the items and the scoring guides – after the data collection, they can be found at <http://pirls.hu/feladatok/>

- comparing and contrasting text information;
- inferring a story's mood or tone;
- interpreting a real-world application of text information.

4. Examine and evaluate content, language, and textual elements:

- evaluating the likelihood that the events described could really happen;
- describing how the author devised a surprise ending;
- judging the completeness or clarity of information in the text;
- determining an author's perspective on the central topic.

Out of the maximum of achievable points in the PIRLS study retrieving information is allocated 20% in the assessment and straightforward inferencing 30%, so the half of the points comes from these two processes of comprehension. An additional 30% of the maximum is for interpreting and integrating information and ideas, another 20% is for examining and evaluating the function of the substantive parts, language usage and other elements of text. So, the tasks that reflect global understanding also make up 50 % of the test. These tasks focus mainly on parts of the text like the author's purpose, the claims made in the text, structure and genre as well as language conventions. The four comprehension processes are present in the test booklets related to both the literary and informational passages.

Exhibit 1: Distribution of Items by Reading Purpose and Process Category

Reading Purpose	Total Number of Items	Number of Multiple-choice Items	Number of Constructed-response Items	Total Number Score Points
Literary Experience	64	34	30	85
Acquire and Use Information	62	30	32	82
Total	126	64	62	167

Reading Process	Total Number of Items	Number of Multiple-choice Items	Number of Constructed-response Items	"Number of Score Points"
Focus on and Retrieve Explicitly Stated Information and Ideas	31	19	12	36
Make Straightforward Inferences	43	29	14	47
Interpret and Integrate Ideas and Information	34	6	28	61
Examine and Evaluate Content, Language, and Textual Elements	18	10	8	23
Total	126	64	62	167

Source: IEA Progress in International Reading Literacy Study (PIRLS) 2006



# Results

The results of the PIRLS assessment can be interpreted in many ways, since literacy abilities fall into multiple dimensions. This is why the results are presented taking numerous analytical viewpoints into account: we examine the gender difference in reading achievement, differences in performance of reading comprehension processes, and in reading for different purposes. Also, we examine how data have changed compared to the results of the 2001 cycle.

## Reading Achievement in the Participating Countries

### Outstanding Hungarian Results

Exhibit 2 displays the distributions of achievement for PIRLS 2006 for 40 participating countries and 5 Canadian provinces on the PIRLS achievement scale in descending order of average reading achievement.

The graph showing the distribution of reading comprehension achievements indicates the ranges in performance for the middle half of students between 25<sup>th</sup> to 75<sup>th</sup> percentiles or the extremes between 5<sup>th</sup> to 95<sup>th</sup> percentiles confidence-interval for average. Although it was to a differing degree from country to country, every PIRLS 2006 participant had some percentage of students who were good readers and some percentage of students who demonstrated difficulties. The majority of countries had approximately a 250-point difference between the 5<sup>th</sup> and 95<sup>th</sup> percentiles of achievement, although some had larger differences and others had more homogeneity in performance. It is important to note that the range in achievement in most countries is lower than the difference in average achievement (263 points) between the highest performing country, the Russian Federation, and the lowest performing country, South Africa. Also, Exhibit 2 shows which countries have significantly higher average scale score than the 500-point PIRLS average (arrow upward) and which countries have lower average scale score (downward arrow).

The best-performing countries in PIRLS 2006 represent different regions of the world geographically:: Hungary, Russia and Bulgaria from Middle & Eastern-Europe, Hong-Kong & Singapore from Asia, Luxembourg, Italy, Germany, the Netherlands, and the Flemish Region in Belgium from Western Europe, Sweden and Denmark in Scandinavia, and finally the Canadian provinces of Alberta, British Columbia and Ontario from North-America.

Comparing the average achievement of participating countries, it can be said that on average, Hungary performed significantly lower than Russia, Hong-Kong, the Canadian province of Alberta and Luxembourg. At

the same time Hungary's average achievement is not significantly different from those of Singapore, the Canadian provinces of Columbia and Ontario, Italy, Sweden, Germany, the Netherlands, the Flemish Region of Belgium, Bulgaria and Denmark. Thus there are 4 countries and provinces that had higher achievement than Hungary in the 2006 PIRLS assessment. There is no statistically significant

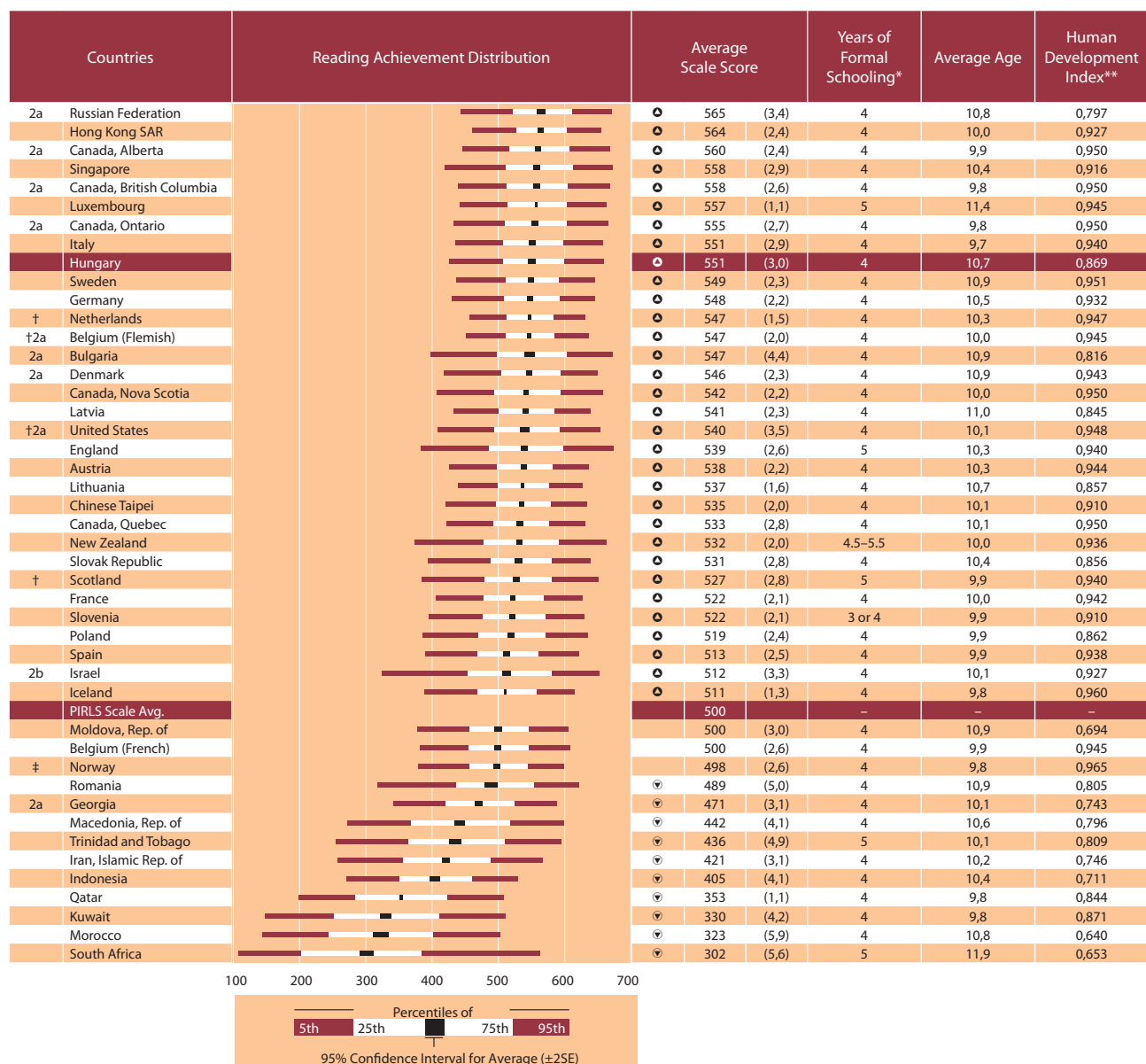
PIRLS' reading achievement scale was based on the students' achievement in the participating countries to have a mean of 500, and the standard deviation of 100.. Since the list of the participating countries and the average achievement of the countries can change from cycle to cycle, instead of changing the scale all the time, the ability-scale created in 2001 remained untouched in the 2006 assessment, but the so-called PIRLS scale-average is not identical with the international average any more. As a result of this, the consecutive cycles can easily be compared.

<sup>6</sup> The k. percentile is the point on the ability scale at which k percent of the students performs weaker.



difference between the average achievement of Hungary and eleven countries and member states. The average achievements of the remaining 30 countries are significantly lower than that of Hungary. The best performing countries are Russia, Hong-Kong, Singapore and the Canadian provinces of Alberta and British Columbia, their results are not significantly different from one another. Among them the outstanding ones are Russia and Hong-Kong; these countries achieved significantly higher results than any other participants – not counting Singapore and the Canadian provinces of Alberta and British Columbia.

Exhibit 2: Distribution of Reading Achievement



\* Represents years of schooling counting from the first year of ISCED level 1.

\*\* Taken from United Nations Development Programme's Human Development Report 2006, p. 283-286, except for Chinese Taipei taken from Directorate General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. Statistical Yearbook 2005. Data for Belgium (Flemish) and Belgium (French) are for the entire country of Belgium. Data for England and Scotland are for the United Kingdom.

† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

● Country average significantly higher than PIRLS scale average.

▼ Country average significantly lower than.

NOTE: See Exhibit C.1 for percentiles of achievement in reading.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

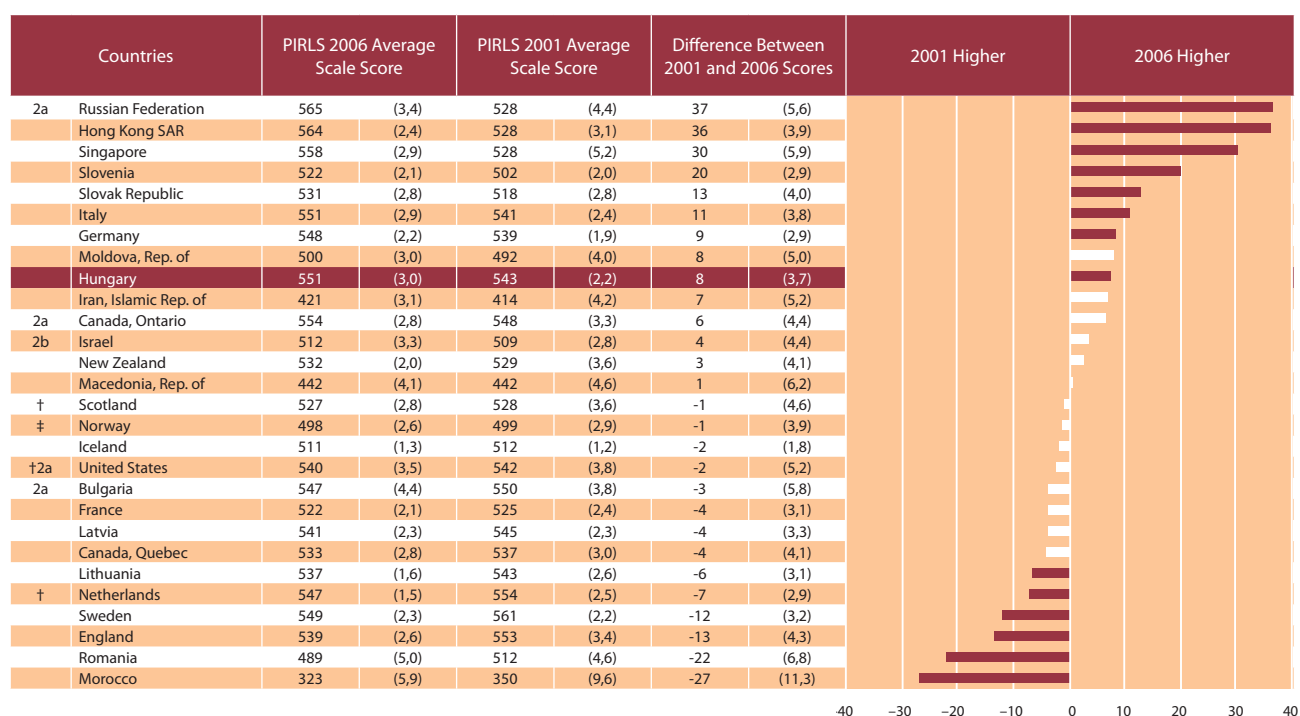
The PIRLS test can measure the students' reading achievement only with certain errors, since if we conducted the same test using the same booklet on another day, the results would be similar but not exactly the same. Similarly, because of sampling, conclusions about the entire population can be made with some errors.. If we calculate the sampled students' average result, for example, what we get is most probably not the average reading achievement of the country's students but an appropriate result very close to it. The extent to which the averages and other statistical information obtained using the results of the sampled students approximate the corresponding indicators of the target population – the 4th-grade students in this case – is determined by the standard errors of the estimates. Therefore, when presenting the assessments' results, the standard error or the 95 % confidence-interval are always there (the interval containing the estimated value, which contains also the desired value with the probability of 95 %). For example, the average reading achievement using the results of the students participating in the test in Hungary is 551 points, and the standard error is 2.9 points. To calculate the lower limit of confidence interval that applies to the Hungarian average, take away twice the value of the standard error from the average of 551 points – the result is 545.2 points. To calculate the upper limit, we add twice the value of the standard error to the average score, so we get 556.8 points. Therefore, the average reading achievement of the Hungarian students fall between 545.2 and 556.8 points with the probability of 95%. When comparing the average achievement of two different groups of students, we also have to take into consideration the standard errors. We can say that one group of students has achieved better results than the other only if the probability of the difference in the results is merely an effect of sampling and measurement errors are lower than 5%. This is when we can say that the results of the two groups of students are statistically significantly different. For example, the difference between the averages of Hungary and Singapore is 8 points to Singapore, but taking the standard errors into consideration this difference is statistically insignificant; at the same time, the difference between the student average from Hungary and Hong-Kong is 13 points, which is high even if we take the standard errors into consideration, so the results of Hong-Kong are significantly better on average than those of Hungary.

## Changes in the results compared to 2001

### *Significant improvement in the reading achievement of the Hungarian students*

Since the PIRLS 2006 reading achievement scale is identical with the scale created in 2001, the changes that occurred in the participating countries – including Hungary – between these two dates can be traced. Exhibit 3 shows how much the average results of the participating 26 countries and 2 Canadian provinces have changed compared to the previous assessment cycle. The participants are ranked according to the traceable increase in their average results, at the top of the chart you can see the countries in which the increase was the biggest between 2006 and 2001. Statistically significant changes are marked with claret. Besides Hungary, the average reading achievement of the 4th-grade students has improved significantly in Russia, Hong-Kong, Singapore, Slovenia, Slovakia, Italy and Germany compared to 2001. The change in Moldova is statistically insignificant even though the difference between the average results achieved in the two cycles was bigger than in the case of Hungary. The countries achieving statistically significantly weaker results than in 2001 are Lithuania, the Netherlands, Sweden, England, Romania and Morocco.

Exhibit 3: Trends in Reading Achievement



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

The improvement in Hungary was caused probably by several smaller changes in the education system. Even though grade repetition was repealed in the lower primary school till grade 4, and instead of summative assessment was exchanged by formative assessment which has been introduced since the first PIRLS assessment, the effects of this possibly cannot be shown in the literacy abilities due to the short time passed from the introduction of the new legislation. At the same time, publishing new schoolbooks<sup>7</sup>, changing local schedules and instructions, introducing competency-based education and the development plans could have caused the improvement in the Hungarian students' reading achievement results. The results of the 2011 PIRLS cycle will be especially interesting for the Hungarian education, since the effect of the above mentioned reforms will possibly be seen more clearly.

In Russia and Hong-Kong there a great improvement can be witnessed as a result of reforming the primary level of the education and teaching reading. PIRLS publishes an encyclopedia for each assessment, which is compiled by the participating countries<sup>8</sup>. The PIRLS 2006 Encyclopedia describes the extensive educational reform in Russia which precede the 2006 assessment., The education system has been undergoing structural changes in their primary system that involves adding one more year of schooling at the primary level, as well as associated curricular and instructional reforms. At the time of the data collection for the 2001cycle, more than half of the students were still in the three-year system, whereas by 2006 the transition essentially was complete to the 4-year system. When the transition was conceived, in order to extend the length of primary education policy makers had an idea to lower the school entry age to 6 instead of the previous 7. But in actuality, parents are still

<sup>7</sup> According to a statement in the 2004 study, all four of the most popular schoolbooks were recently written. See also : [//www.okm.gov.hu/letolt/kozokt/tankonykutatasok/cd2\\_balogh\\_honti/vegleges.pdf](http://www.okm.gov.hu/letolt/kozokt/tankonykutatasok/cd2_balogh_honti/vegleges.pdf)

<sup>8</sup> Mullis, I. V. S. et al.: PIRLS 2006 Encyclopedia: A Guide to Reading Education in the Forty PIRLS 2006 Countries. Chestnut Hill, MA: Boston College, 2007.

sending their children to school at age 7. As a result of this, the average age of the assessed students has increased between 2001 and 2006, from 10.3 to 10.8, which could also have been a factor in causing the great improvement in the average reading achievement.

In Hong-Kong, where developing reading and building a reading culture is looked upon as the basis of a life-long learning, the educational government has made many measures – as part of a curriculum-reform started in 2000 – that promotes the improvement of literacy in both of the country's official languages, English and Chinese. In 2000, the Curriculum Development Council established clear reading goals for schools giving them the responsibility for promoting reading and building the culture of reading.. The Curriculum Development Council, gave schools the power to adjust the curriculum and schedule to meet the literacy needs of students, and suggested that teachers expand the range of teaching materials used in lessons. Schools ensure that students are given opportunities to develop reading fluency in many schools they train and employ “mentors” (Reading Mothers) to help children read. The PIRLS 2001 results were discussed by both the council and the wider public, and even though the results were very good then, the question arose whether the 4th-grade students' literacy abilities meet the challenges of the 21st century. A book was published with the results and the conclusions, special workshops were organized for nursery & school teachers and parents, also a web-page was created on this subject. In 2004 they introduced the Regional Assessment System, in which the Chinese reading part is based on the PIRLS Assessment Framework.

## Gender Differences in Reading Achievement

### *Small Difference in Averages Reading Achievement between Boys and Girls*

As it is well-known from previous studies, in general girls have higher reading achievement than boys. Since reading literacy is one of the main conditions of life-long learning, education system should place a special emphasis on improving the boys' reading abilities reducing the difference between the genders to the smallest possible one.

Exhibit 4 shows the differences and trends in Average Reading Achievement by gender. The participants are ranked according to the differences in an increasing order. As it was predictable from former studies, the girls performed better than boys in every participating country. With the exception of Spain and Luxembourg, the difference is statistically significant in every country including Hungary

The changes in the results of the girls and the boys can also be read from the chart in countries that took part in both of the PIRLS cycles. In Hungary, the boys' average reading achievement increased significantly, with 12 points compared to the results of PIRLS 2001. The girls' average results also increased with 3 points, but this growth is statistically insignificant. So, the relatively high gender difference of 14 points dropped down to 5 points in 2006, which is still statistically significant however, it is one of the smallest among the participants.

Along with Hungary, Germany, Ontario province in Canada, Iran and Moldavia show results which mirror significant improvement in boys' average reading achievement. Both, girls' and boys' results increased in Italy, Hong-Kong, Slovakia, Russia, Singapore and Slovenia. At the same time, overall average reading achievement results declined significantly in Romania, Morocco, Sweden and England; in the Netherlands only the girls' results decreased while Lithuania showed overall but insignificant decline. The boys performed better in 2006 than in 2001, since there was no significant decrease in boys' results in any of the participating countries. The girls' results remained the same

or increased significantly. The results of countries that took part in both assessments show that on average internationally, the girls' results increased with one point, not significantly, while the boys' results increased with 5 points<sup>9</sup> significantly.

Exhibit 4: Differences in Average Reading Achievement by Gender

Countries		Girls						Boys						Difference Girls Higher Average Achievement Than Boys				
		Percent of Girls		Average Scale Score		Difference Between 2001 and 2006 Scores		Percent of Students		Average Scale Score		Difference Between 2001 and 2006 Scores						
	Luxembourg	49	(0,7)	559	(1,3)				51	(0,7)	556	(1,6)				3	(2,0)	
	Spain	49	(1,1)	515	(2,6)				51	(1,1)	511	(3,1)				4	(2,8)	
	Belgium (French)	50	(0,7)	502	(2,8)				50	(0,7)	497	(2,9)				5	(2,3)	●
	Hungary	50	(0,9)	554	(3,6)	3	(4,3)		50	(0,9)	548	(2,9)	12	(3,8)	●	5	(2,6)	●
†2a	Belgium (Flemish)	50	(0,9)	550	(2,3)				50	(0,9)	544	(2,4)				6	(2,5)	●
	Italy	48	(0,8)	555	(3,3)	10	(4,2)	●	52	(0,8)	548	(3,3)	11	(4,2)	●	7	(2,9)	●
†	Netherlands	51	(0,8)	551	(2,0)	-11	(3,4)	▼	49	(0,8)	543	(1,6)	-4	(3,2)		7	(2,2)	●
	Germany	49	(0,7)	551	(2,5)	6	(3,3)		51	(0,7)	544	(2,5)	11	(3,5)	●	7	(2,6)	●
2a	Canada, Alberta	48	(0,8)	564	(2,4)				52	(0,8)	556	(2,7)				8	(1,9)	●
2a	Canada, British Columbia	50	(0,8)	562	(2,9)				50	(0,8)	554	(3,1)				9	(3,0)	●
	Austria	49	(0,7)	543	(2,3)				51	(0,7)	533	(2,6)				10	(2,3)	●
†2a	United States	51	(0,7)	545	(3,3)	-6	(5,0)		49	(0,7)	535	(4,4)	2	(6,6)		10	(3,2)	●
	Hong Kong SAR	49	(1,3)	569	(2,5)	32	(3,9)	●	51	(1,3)	559	(2,8)	40	(4,5)	●	10	(2,5)	●
	France	48	(0,7)	527	(2,4)	-3	(3,6)		52	(0,7)	516	(2,4)	-4	(3,9)		11	(2,5)	●
	Slovak Republic	49	(0,8)	537	(2,7)	10	(4,0)	●	51	(0,8)	525	(3,3)	15	(4,7)	●	11	(2,5)	●
	Canada, Quebec	49	(1,0)	539	(2,7)	-5	(4,3)		51	(1,0)	527	(3,5)	-3	(4,7)		13	(3,0)	●
2a	Canada, Ontario	49	(1,1)	562	(3,3)	2	(5,0)		51	(1,1)	549	(3,3)	10	(4,8)	●	13	(3,8)	●
	Chinese Taipei	48	(0,5)	542	(2,2)				52	(0,5)	529	(2,3)				13	(1,9)	●
2a	Denmark	52	(0,9)	553	(2,8)				48	(0,9)	539	(2,7)				14	(3,2)	●
	Moldova, Rep. of	50	(1,0)	507	(3,1)	3	(5,6)		50	(1,0)	493	(3,5)	14	(5,3)	●	14	(2,5)	●
	Iran, Islamic Rep. of	46	(1,1)	429	(5,3)	2	(7,8)		54	(1,1)	414	(3,8)	15	(6,8)	●	14	(6,7)	●
	Romania	48	(1,0)	497	(5,0)	-22	(6,6)	▼	52	(1,0)	483	(5,7)	-22	(8,1)	▼	14	(4,2)	●
2b	Israel	48	(1,2)	520	(4,1)	1	(5,3)		52	(1,2)	506	(3,7)	8	(5,2)		15	(4,0)	●
2a	Russian Federation	51	(0,9)	572	(3,9)	38	(5,8)	●	49	(0,9)	557	(3,4)	35	(5,9)	●	15	(2,9)	●
	Singapore	48	(0,6)	567	(3,1)	27	(6,1)	●	52	(0,6)	550	(3,3)	34	(6,6)	●	17	(2,9)	●
	Poland	51	(0,8)	528	(2,6)				49	(0,8)	511	(2,7)				17	(2,6)	●
2a	Georgia	48	(1,0)	480	(3,3)				52	(1,0)	463	(3,8)				17	(3,2)	●
	Morocco	47	(1,0)	332	(6,6)	-29	(11,6)	▼	53	(1,0)	314	(6,6)	-27	(12,8)	▼	18	(5,8)	●
	Sweden	48	(1,1)	559	(2,6)	-14	(3,7)	▼	52	(1,1)	541	(2,6)	-10	(3,6)	▼	18	(2,5)	●
	Lithuania	49	(0,9)	546	(2,0)	-6	(3,5)		51	(0,9)	528	(2,0)	-7	(3,4)		18	(2,2)	●
	Iceland	50	(0,9)	520	(1,7)	-2	(2,5)		50	(0,9)	501	(1,9)	-2	(2,4)		19	(2,5)	●
‡	Norway	49	(1,1)	508	(2,8)	-3	(4,5)		51	(1,1)	489	(3,1)	0	(4,6)		19	(3,2)	●
	England	50	(0,9)	549	(3,0)	-14	(4,9)	▼	50	(0,9)	530	(2,8)	-11	(4,7)	▼	19	(2,7)	●
	Slovenia	48	(0,7)	532	(2,1)	19	(3,3)	●	52	(0,7)	512	(2,7)	22	(3,6)	●	19	(2,5)	●
	Indonesia	49	(0,9)	415	(4,2)				51	(0,9)	395	(4,6)				20	(3,3)	●
2a	Bulgaria	49	(1,0)	558	(4,4)	-5	(5,7)		51	(1,0)	537	(5,0)	-1	(6,8)		21	(3,8)	●
	Canada, Nova Scotia	49	(0,7)	553	(2,5)				51	(0,7)	531	(2,8)				21	(3,2)	●
	Macedonia, Rep. of	49	(0,7)	453	(4,4)	1	(6,8)		51	(0,7)	432	(4,4)	1	(6,5)		21	(3,5)	●
†	Scotland	51	(0,9)	538	(3,6)	2	(5,3)		49	(0,9)	516	(3,1)	-3	(5,2)		22	(3,8)	●
	Latvia	48	(1,0)	553	(2,7)	-3	(4,1)		52	(1,0)	530	(2,6)	-4	(3,6)		23	(2,7)	●
	New Zealand	49	(0,9)	544	(2,2)	2	(5,2)		51	(0,9)	520	(2,9)	4	(5,1)		24	(3,1)	●
	Trinidad and Tobago	49	(1,7)	451	(4,9)				51	(1,7)	420	(6,0)				31	(5,6)	●
	South Africa	52	(0,6)	319	(6,3)				48	(0,6)	283	(5,5)				36	(4,6)	●
	Qatar	50	(0,2)	372	(1,7)				50	(0,2)	335	(1,7)				37	(2,6)	●
	Kuwait	50	(2,0)	364	(4,7)				50	(2,0)	297	(6,2)				67	(7,5)	●
	Nemzetközi átlag	49	(0,2)	509	(0,6)	1	(1,0)		51	(0,2)	492	(0,6)	5	(1,1)	●	17	(0,5)	

† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

NOTE: The International Average does not include the results from the Canadian provinces.

● Average significantly higher than other gender

○ The 2006 result is significantly higher.

▼ The 2006 result is significantly lower.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

## Results in Reading for Different Purposes

### *The Hungarian Students Achievement is Better in Reading for Literary Purposes*

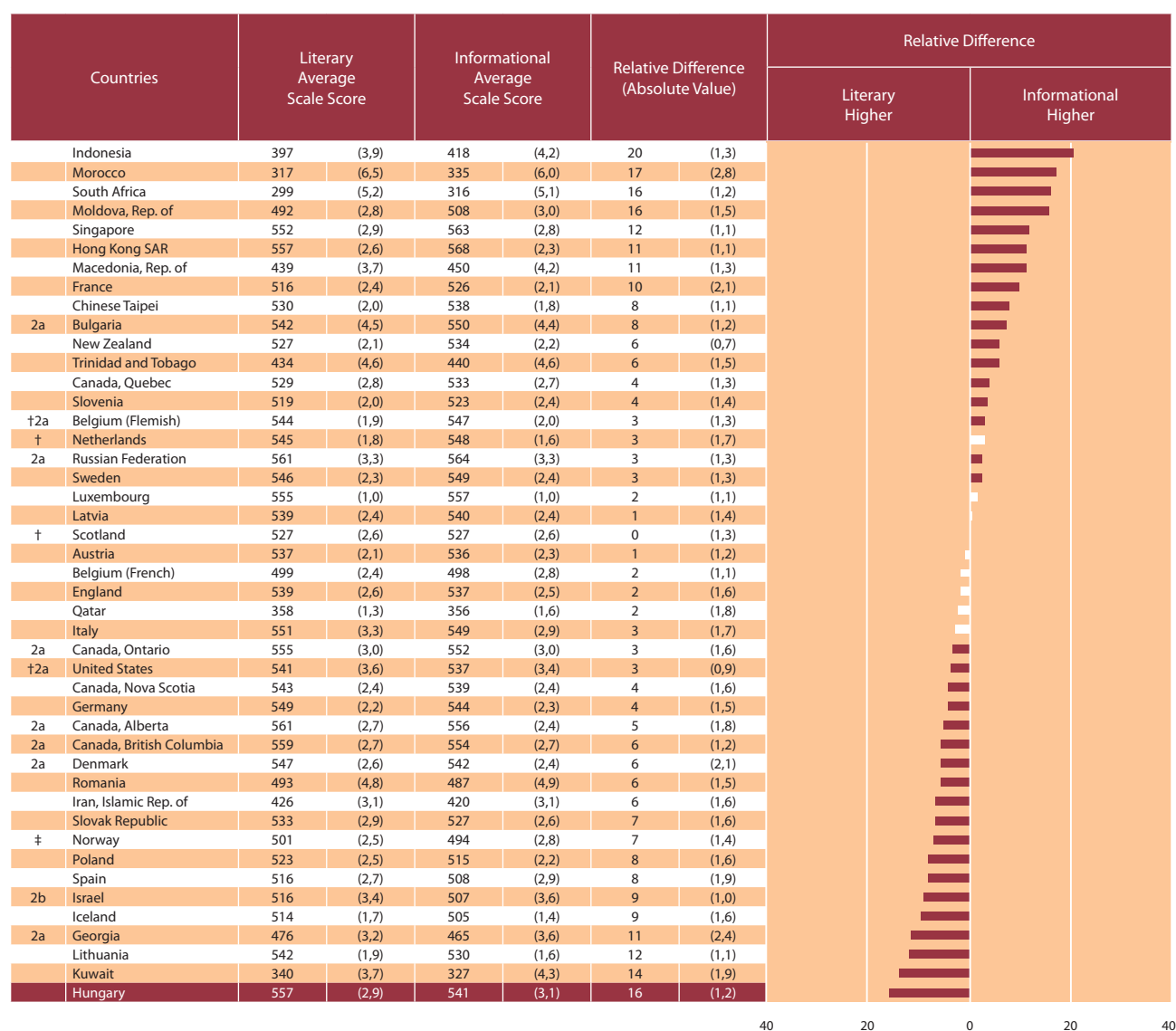
The contextual framework of the PIRLS assessment makes a distinction between passages based on their reading purpose – written either for literary or informational purposes. The achievement in reading for different purposes will be presented separately.

<sup>9</sup> The international average in the volume is calculated in a way that all of the countries are equal irrespectively of the number of the 4th grade students in the country, so the international average is the average of the countries' average results.



Exhibit 5 shows the average achievement in reading for literary and informational purposes in each country. The two numerical scale scores are not directly comparable, since they represent different constructs and reading purposes. Also the two reading purposes were represented in the assessment with passages and tasks of different difficulties. So, when the scale was created, the international average for each purpose was scaled to be 500, the same as the overall PIRLS scale average, and the standard deviation was scaled to be 100. It is not possible to examine and compare positions on the two scales together and say whether students participating in the study are better at understanding literary or informational passages. However, the two scales allow us to examine relative strengths and weaknesses of countries by comparing the relative positions of the participants on the two scales. Whether a given country achieved better results on the reading for literary purposes or on the reading for informational purposes compared to the PIRLS scale average, in other words, on which scale the country achieved better results compared to the other countries.

Exhibit 5: Relative Difference in Performance Between Literary and Informational Purposes



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

■ Difference statistically significant  
□ Not statistically significant

There is a significant difference between the average achievement in reading for literary and informational purposes in most of the countries; most of the participants have significantly higher relative performance compared to the 500 points average of the PIRLS scale in one reading purpose compared to the other (the claret line marks the statistically significant difference). The countries with relatively better performance in informational reading are shown in the upper portion in the exhibit, and those with relatively better performance in literary reading are shown in the lower portion. There is considerable diversity among countries with a relative strength in literary reading and in informational reading, that is, there are countries in both groups with better and weaker PIRLS average scale scores. Far-Eastern countries performed relatively better on informational passages as a whole, while other groups of countries with common culture and similar education systems, like the Anglo-Saxon, Scandinavian or the Central-European countries, had no common patterns, performed better on either informational or literary passages.

The Hungarian students' performance was on average substantially better in literary reading than in informational reading. Nonetheless, our students had a very good average (541 points) achievement in informational reading, and in case of literary reading there is no country with significantly higher average achievement than Hungary.

If we examine the changes along each reading purpose in comparison with the PIRLS 2001 study, we can get a more detailed picture compared to looking at the changes on overall reading achievement scale. Exhibit 6 shows the difference between the average achievement of countries in the 2001 and 2006 cycle in literary reading, and Exhibit 7 shows the trends in informational reading. The order of the countries is determined by how big the change is (the claret line marks the statistically significant difference). In literary reading, Hungary on average achieved result 8 points better in 2006 than in

Exhibit 6: Trends in Reading Achievement for Literary Purposes

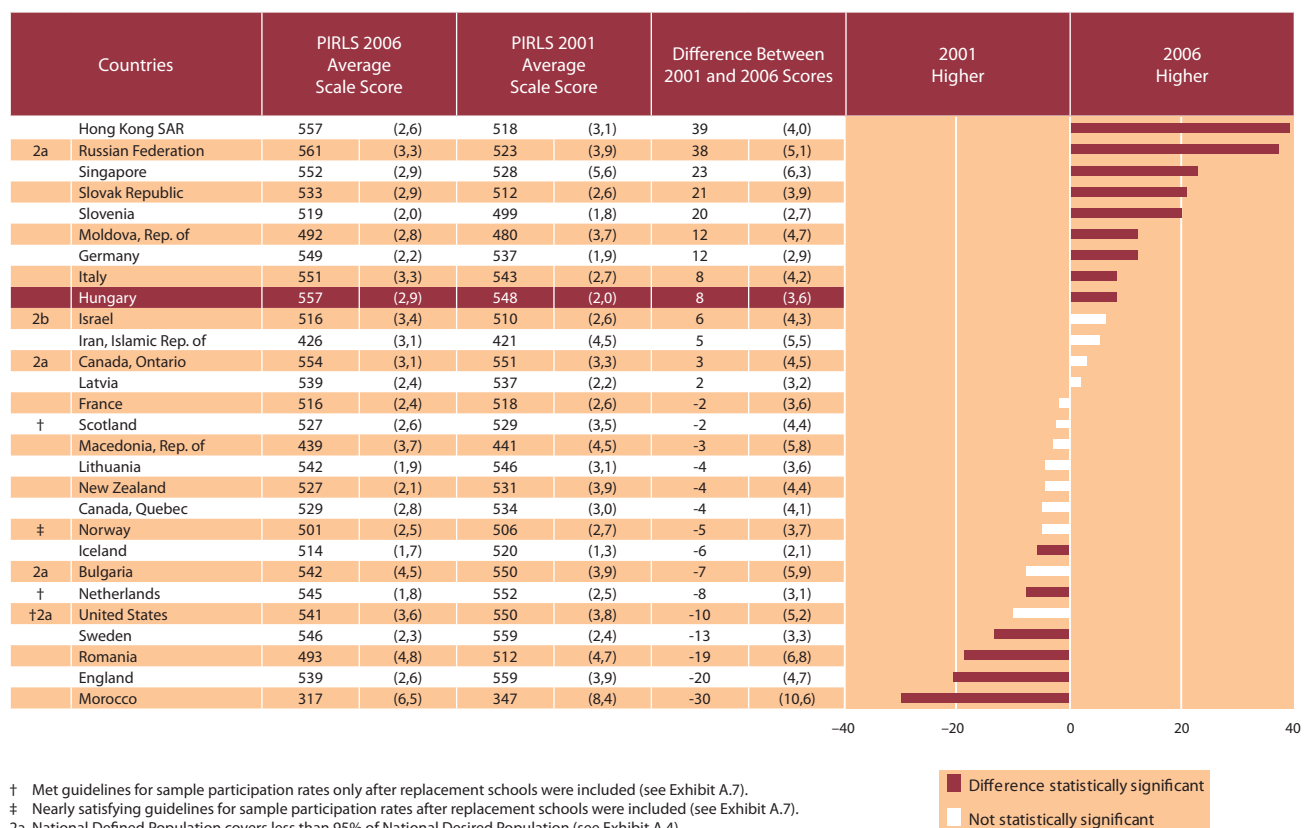
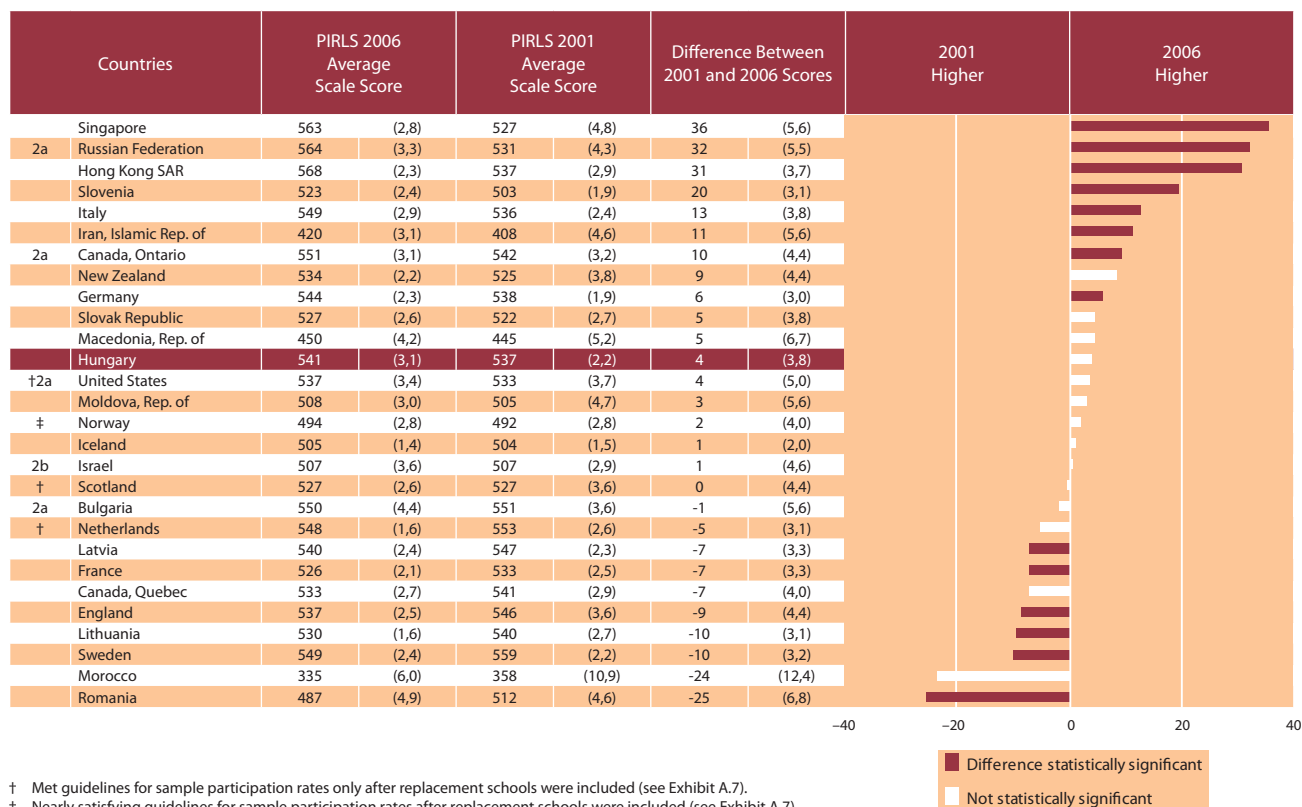


Exhibit 7: Trends in Reading Achievement for Literary Purposes



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

2001, while the improvement in informational reading is only 4 points – not significant. So, the 8-point improvement on the overall reading achievement scale is mostly caused by the better achievement in literary reading.

Along with Hungary, it is also true for Slovenia and Moldova that while there was a significant increase in the average achievement in literary reading, the average achievement in informational reading did not change significantly. In Hong-Kong, Russia, Singapore, Slovenia, Germany and Italy there was a significant increase in both reading purposes while in Iran and the Ontario in Canada the average achievement improved only in informational reading.

Out of the countries that performed weaker in 2006, the average achievement in Romania and England decreased in both reading purposes. Morocco and the Netherlands' achieved weaker results only in literary reading, whereas Lithuania only in informational reading.

## Results According to Reading Comprehension Processes

### *Hungarian Students are more Successful in Tasks Involving Interpreting, Integrating and Evaluating*

Apart from the informational and literary distinction, the test questions or items were designed according to the processes of comprehension needed to answer them. The four processes of comprehension are: focus on and retrieve explicitly stated information; make straightforward inferences; interpret and integrate ideas and information; and examine and evaluate content, language, and textual elements.

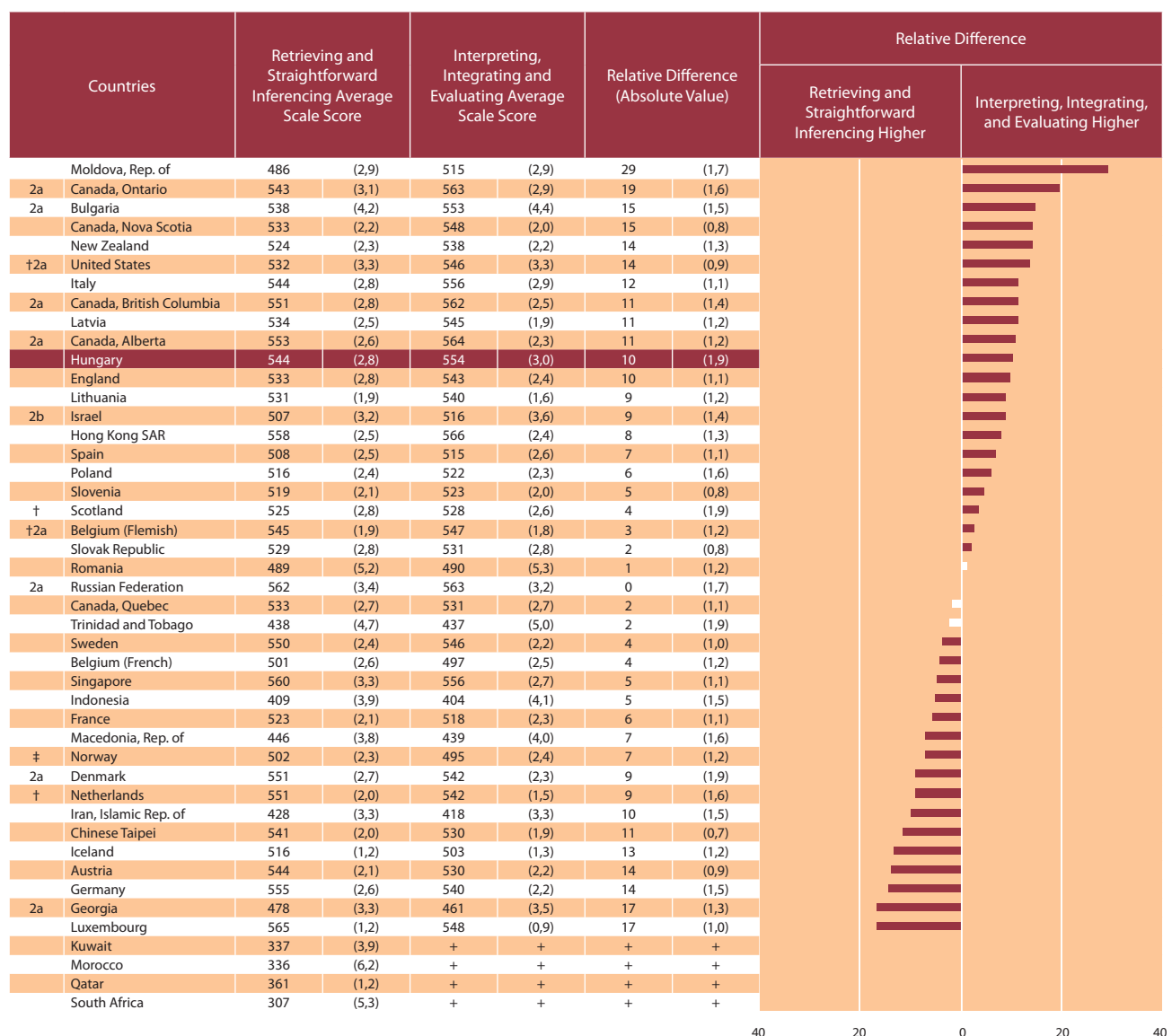


(The four processes of comprehension were introduced in more detail in the chapter “What is PIRLS?”).

Due to the limited time available for the data collection of the study, there were not enough questions of each process-type to create a separate scale for all the four process of comprehension. So, combining the questions that required focusing and retrieving explicitly stated information and making straightforward inferences, the Retrieving and Straightforward Inferencing scale was formed using rather directly text-related questions. Also, combining the processes of interpreting and integrating ideas and information with examining and evaluating content, language and textual elements, the Interpreting, Integrating, and Evaluating scale was formed, which represents tasks requiring a global interpretation of the text.

Exhibit 8 shows the average achievement on the scale of the two processes of comprehension and the difference between the two. The participants are ranked in the exhibit according to the difference between their average achievement on the Interpreting, Integrating, and Evaluating and the Retrieving

Exhibit 8: Relative Differences in Performance Between Reading Comprehension Processes



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A plus (+) sign indicates average achievement could not be accurately estimated on the interpreting, integrating, and evaluating scale.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

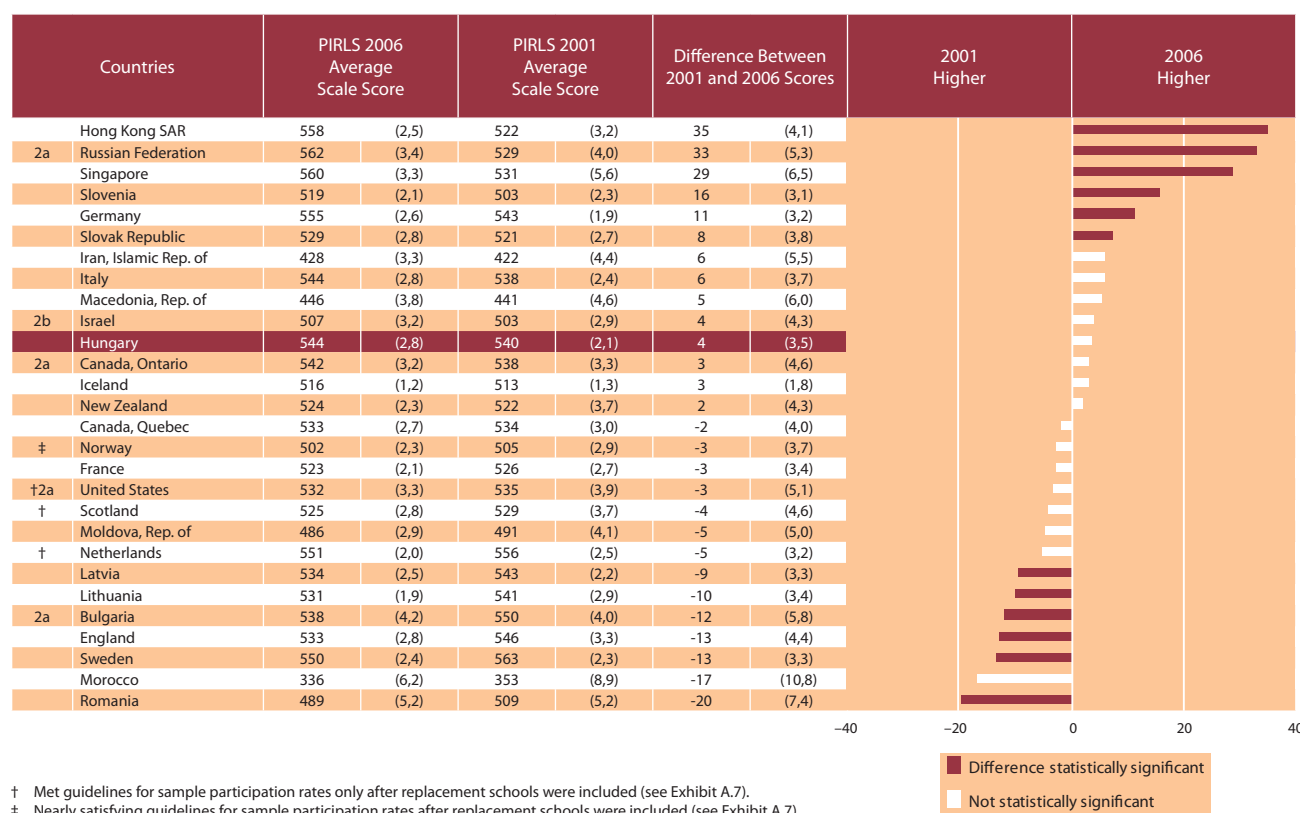
and Straightforward Inferencing scale. Similarly to the performance related to reading purposes, the performance on these two scales can only be compared relatively. Approximately half of the countries performed better on the Retrieving and Straightforward Inferencing scale compared to the PIRLS-scale's average, while the other half was relatively better in global interpretation of the passages.

Hungary's performance was significantly better on the Interpreting, Integrating, and Evaluating scale, where the Hungarian students achieved an average of 554 points. Compared to this, the average achievement on the Retrieving and Straightforward Inferencing scale is significantly, 10 points lower, which is still highly above the PIRLS-scale average of 500 points. In the majority of the Anglo-Saxon (England, Scotland, the United States and the English-speaking provinces of Canada) and the Central/Eastern-European (Poland, Moldavia, Bulgaria, Latvia and Slovenia) countries also had better performance on the Interpreting, Integrating, and Evaluating scale.

At the same time, the German-, and French-speaking countries along with the Scandinavian countries – like Germany, Austria, French-speaking Belgium, France, Denmark, Sweden, Norway, Luxembourg and the Netherlands – have significantly better results on the Retrieving and Straightforward Inferencing scale.

Exhibit 9 shows the Trends in Reading Achievement for Retrieving and Straightforward Inferencing Processes and Exhibit 10 shows the Trends in Reading Achievement for Interpreting, Integrating, and Evaluating Processes in those countries which took part in both assessment cycles. Hungarian students performed 5 points better on the Interpreting, Integrating, and Evaluating scale than on the Retrieving and Straightforward Inferencing scale in the PIRLS 2001 assessment. By the time of the 2006 data collection, on average there was a 9 point increase on the Interpreting, Integrating,

Exhibit 9: Trends in Reading Achievement for Retrieving and Straightforward Inferencing Processes



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

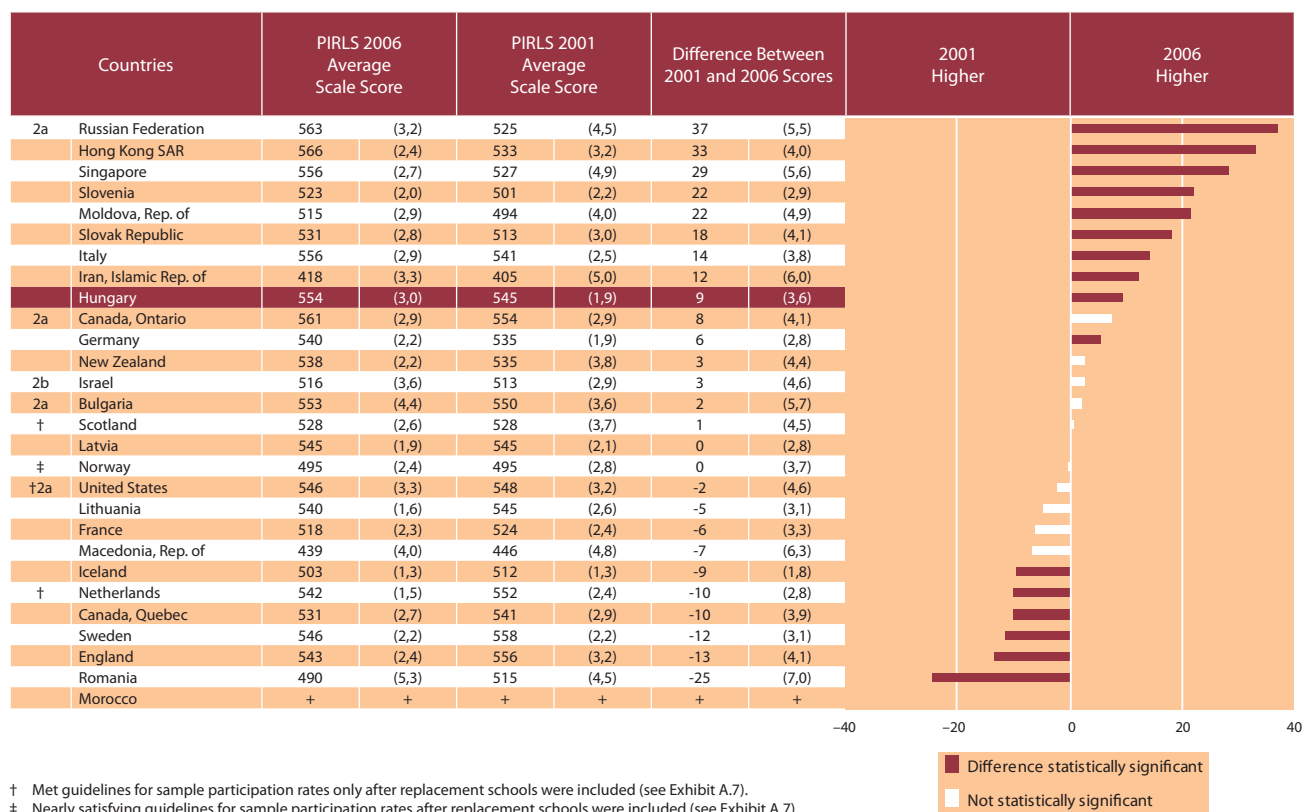
SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

and Evaluating scale, while on the Retrieving and Straightforward Inferencing scale there was a non-significant 4-point increase. This is how the 10-point difference was scaled in the 2006 assessment cycle.

Out of the countries performing better on the 2006 overall reading achievement scale the countries that performed better in both process-types are Russia, Hong-Kong, Singapore, Slovenia, Slovakia and Germany, while Italy – similarly to Hungary – improved only on the Interpreting, Integrating, and Evaluating scale. Out of the countries with lower performance in 2006, the average achievement of England, Sweden and Romania were weaker on both scales, while the Netherlands performed significantly weaker only on the Interpreting, Integrating, and Evaluating scale and Lithuania only on the Retrieving and Straightforward Inferencing scale.

The Hungarian 4th-grade students have outstanding literacy abilities compared to the international average. What is more, the average achievement between the 2001 and 2006 PIRLS assessments increased, which was mainly due to a significant rise in the average achievement of the Hungarian boys; also a significant increase can be observed in literary reading and in the Interpreting, Integrating, and Evaluating processes. At the same time, there was no significant change in informational reading or the Retrieving and Straightforward Inferencing processes, as the girls' results have not changed statistically significantly since the 2001 assessment cycle.

Exhibit 10: Trends in Reading Achievement for Retrieving and Straightforward Inferencing Processes



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A plus (+) sign indicates average achievement could not be accurately estimated on the interpreting, integrating, and evaluating scale.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

## PIRLS 2006 International Benchmarks

The previous chapter presented the countries' performances on the reading achievements scale, and showed the average achievement in literary and informational reading, and also demonstrated which countries performed better on either of the two processes-of-comprehension scales. In addition to these, PIRLS & TIMSS International Study Center uses four points on the scale as international benchmarks to provide descriptions of achievement on the scale in relation to performance on the questions asked

When designing the benchmarks, the researchers made an effort to represent the range of performance shown by students internationally to provide valuable information for every participant. For PIRLS 2006, the Advanced International Benchmark is 625, the High International Benchmark is 550, the Intermediate International Benchmark is 475, and the Low International Benchmark is 400. Then they conducted a detailed scale anchoring analysis to describe reading comprehension at these benchmarks.

This chapter describes the reading skills and strategies demonstrated by fourth-grade students at each of the international benchmarks. In addition, it describes the percentages of students reaching the PIRLS 2006 International Benchmarks of Reading Achievement.

### What reading skills and strategies do students need at each benchmark?

In thinking about the reading demands underlying any assessment questions, there is, of course, a substantial interaction between the sophistication of the comprehension required by the question, the length and complexity of the text, and the likelihood of the students' familiarity with the reading content and structure. Although the PIRLS 2006 texts were constrained by the assessment situation, they still varied in features such as length, syntactic complexity, vocabulary, abstractness of ideas, and organizational structure. In particular, because of the differences between the literary and informational texts, the benchmark descriptions are presented separately for the two reading purposes.

Considering students' reading achievement scale scores, criteria were applied to identify the sets of items that students reaching each international benchmark were likely to answer correctly and that those at the next lower benchmark were unlikely to answer correctly.

Exhibit 11 displays the Descriptions of the PIRLS 2006 International Benchmarks of Reading Achievement in connection with literary and informational texts. Students of a certain level meet the criteria of the benchmark, while the students one level lower do not. Naturally, students reaching a particular benchmark also meet the criteria of the lower benchmarks. The benchmarks are discussed here only in general, the items will be presented in the soon-to-be published PIRLS 2006 National Report.

Exhibit 11: Descriptions of the PIRLS 2006 International Benchmarks of Reading Achievement

Performance benchmark	General description of the benchmark	What students reaching the benchmark are able to do?	
		Reading for literary purposes	Reading for informational purposes
<b>Advanced International Benchmark</b> (625 points on the PIRLS scale)	Students performing this level respond fully to the PIRLS 2006 assessment. They could make interpretations of figurative language and demonstrate that they understand the function of organizational features. They can integrate information across the texts, and provide full text-based support. They comprehend, interpret, and integrate details across the relatively challenging texts.	<ul style="list-style-type: none"> <li>Integrate ideas across a text to provide interpretations of a character's traits, intentions, and feelings, and provide full text-based support</li> <li>Interpret figurative language</li> <li>Begin to examine and evaluate story structure</li> </ul>	<ul style="list-style-type: none"> <li>Distinguish and interpret complex information from different parts of text, and provide full text-based support</li> <li>Understand the function of organizational features</li> <li>Integrate information across a text to sequence activities and fully justify preferences</li> </ul>
<b>High International Benchmark</b> (550 points on the PIRLS scale)	Students reaching this level are competent readers. They could retrieve significant details embedded across the text and provides text-based support for inferences. They could use organizational features to navigate through the informational texts, and make inferences and connections. Students recognize main ideas, some textual features and elements, and are beginning to integrate ideas and information across texts.	<ul style="list-style-type: none"> <li>Locate relevant episodes and distinguish significant details embedded across the text</li> <li>Make inferences to explain relationships between intentions, actions, events, and feelings, and give text-based support</li> <li>Recognize the use of some textual features (e.g., figurative language, an abstract message)</li> <li>Begin to interpret and integrate story events and character actions across the text</li> </ul>	<ul style="list-style-type: none"> <li>Recognize and use a variety of organizational features to locate and distinguish relevant information</li> <li>Make inferences based on abstract or embedded information</li> <li>Integrate information across a text to recognize main ideas and provide explanations</li> <li>Compare and evaluate parts of a text to give a preference and a reason for it</li> <li>Begin to understand textual elements, such as simple metaphors and author's point of view</li> </ul>
<b>Intermediate International Benchmark</b> (475 points on the PIRLS scale)	Students demonstrate some reading proficiency, especially with the stories. They are able to understand the plots at a literal level, and also to make some inferences and connections across the texts. In the informational texts, they are able to use text organizers (headings, illustrations, etc) to find information beyond the initial parts of the texts, and to provide two pieces of information in answering a question.	<ul style="list-style-type: none"> <li>Identify central events, plot sequences, and relevant story details</li> <li>Make straightforward inferences about the attributes, feelings, and motivations of main characters</li> <li>Begin to make connections across parts of the text</li> </ul>	<ul style="list-style-type: none"> <li>Locate and reproduce one or two pieces of information from within the text</li> <li>Make straightforward inferences to provide information from a single part of the text</li> <li>Use subheadings, textboxes, and illustrations to locate parts of the text</li> </ul>
<b>Low International Benchmark</b> (400 points on the PIRLS scale)	Students display basic reading skills. They are able to recognize, locate and reproduce explicitly stated details from the informational texts, particularly if the details were close to the beginning of the text. They also demonstrate success with some items requiring straightforward inferences.	<ul style="list-style-type: none"> <li>Recognize an explicitly stated detail</li> <li>Locate a specified part of the story and make an inference clearly suggested by the text</li> </ul>	<ul style="list-style-type: none"> <li>Locate and reproduce explicitly stated information that is readily accessible, for example, at the beginning of the text or in a clearly defined section</li> <li>Begin to provide a straightforward inference clearly suggested by the text</li> </ul>

## Percentages of Students Reaching the PIRLS 2006 International Benchmarks

### Hungarian students reached higher benchmarks in great percentage

Exhibit 12 shows the Percentages of Students Reaching the PIRLS 2006 International Benchmarks of Reading Achievement. Since students reaching a particular benchmark also reached lower benchmarks, the percentages are cumulative. The results are presented in descending order according to the percentage of students reaching the Advanced International Benchmark.

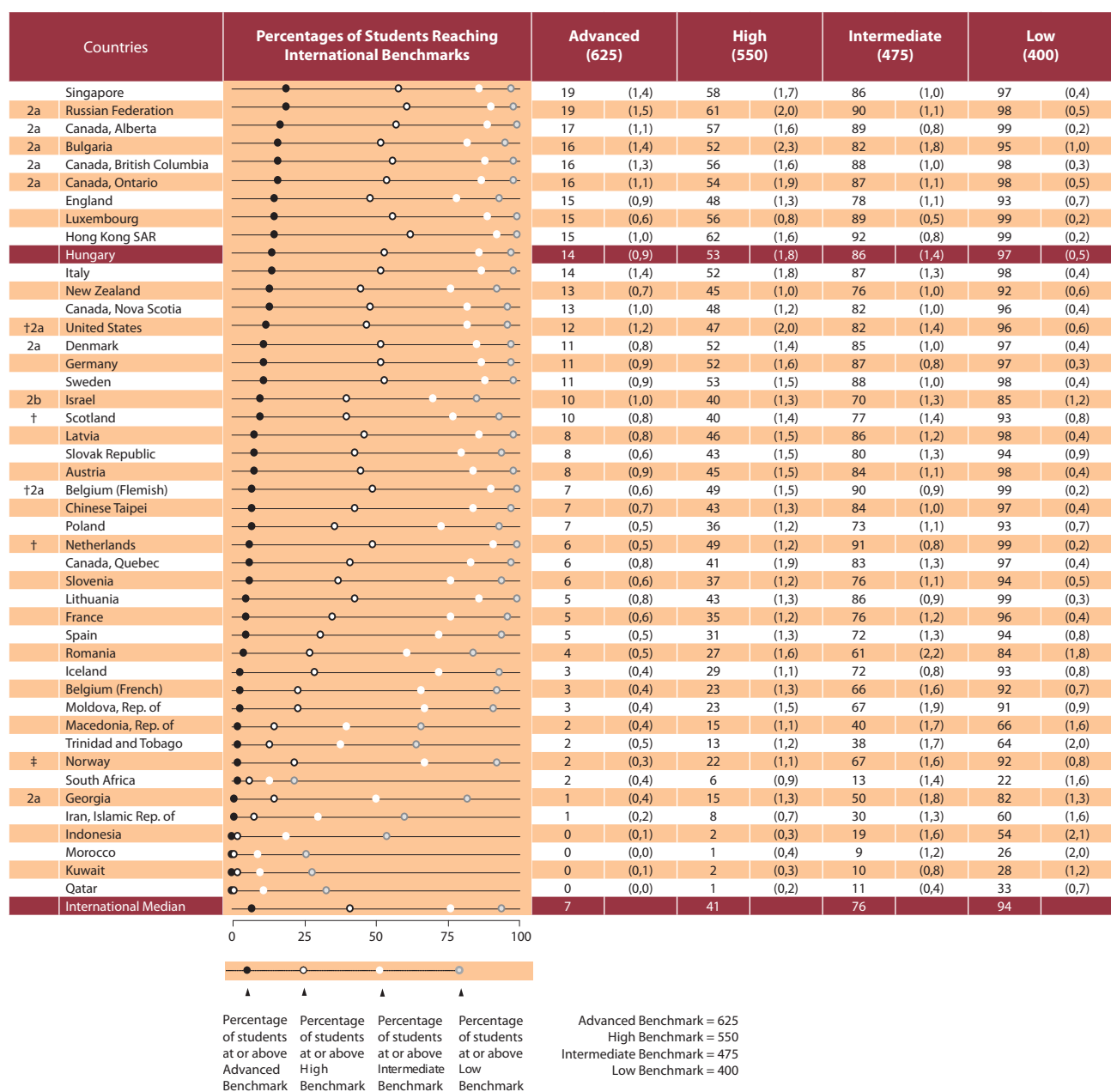
In general, the PIRLS 2006 countries with the highest average achievement had greater percentages of students reaching each benchmark, and lower achieving countries had smaller percentages. Among the countries with the highest average achievement, Singapore, the Russian Federation and the Canadian province Alberta had nearly one fifth of their students (17–19%) reaching the Advanced International Benchmark, 57–61% reaching the High International Benchmark, 86–90% reaching the Intermediate International Benchmark and almost every student (97–99%) reached the Low International Benchmark. Hungary, the Canadian provinces British Columbia and Ontario, Luxemburg, Hong Kong SAR and Italy had somewhat smaller percentages of students reaching the Advanced International Benchmark (14–15%), but the percentages of the students that reached the Intermediate International Benchmark and the Low International Benchmark was the same as in Singapore and Russia. The same percentages of the students (15–17%) reached the Advanced International Benchmark in England and Bulgaria as the best performing countries, but slightly fewer students reaching one or another of the lower benchmarks..

In Hungary, 14% of the students reached the Advanced International Benchmark, while more than half of them (53%) reached the High International Benchmark. 86% percent of the Hungarian students reached the Intermediate International Benchmark, and almost everyone (97%) reached the Low International Benchmark. Exhibit 12 also provides the median percentages for each of the international benchmarks. By definition, half the countries will have a percentage above the median percentage and half below. According to this, in half of the participating countries more than 7% of the students reached the Advanced International Benchmark. The median of the high benchmark is 42%, while that of the intermediate is 77%. Quite impressively, the median of the low benchmark is 94%, in other words, in half of the countries 94% of the students met the requirements for the low benchmark. Nevertheless, there are no countries in PIRLS 2006 where 100 % of the students reached at least the Low International Benchmark. In Hungary, 3% of the students did not reach even the low benchmark, they struggle with serious deficiencies on the field of reading literacy.

In the South-African Republic, Morocco, Kuwait and Qatar, more than half of the student did not reach the low benchmark, and in the last three countries only 10% of the 4<sup>th</sup>-grade students reached the intermediate benchmark and 23-33% reached the low benchmark; so, between three-fourths and two-thirds of the 4<sup>th</sup>-grade students possess only minimal literacy abilities.



Exhibit 12: Percentages of Students Reaching the PIRLS 2006 International Benchmarks of Reading Achievement



† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

(.) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

NOTE: The International Median does not include the results from the Canadian provinces.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

## Changes since 2001

### An increasing number of Hungarian students reaching the Advanced International Benchmark

Exhibit 13 shows the changes between PIRLS 2001 and PIRLS 2006 PIRLS cycles in the percentages of fourth-grade students reaching the benchmarks. In most countries, there were some significant changes in the percentages of students at the different benchmarks between 2001 and 2006. 11 countries and provinces the percentages of the students reaching at least one of the benchmarks increased significantly, while in 7 other countries the percentages of students reaching at least one of

the benchmarks dropped significantly. On an international level, with each one of the benchmarks, a small but significant increase can be observed. The percentages of the students reaching the low benchmark mostly increased, 6 countries and one Canadian province produced an improvement in the percentages of the students reaching the low benchmark, while the percentages fell only in one country (Romania). In addition, the percentages of the students reaching the intermediate benchmark increased in 8 countries and one Canadian province, and fell in 3 countries. Results are less unified in the case of the two higher benchmarks, the percentages of the students reaching both advanced and the high benchmarks increased in 7 participants, and dropped in 7 other countries compared to the findings of the 2001 assessment.

Consistent with significant improvements in their overall average achievement between PIRLS 2001 and PIRLS 2006, fourth-grade students in Singapore, Hong-Kong SAR and Slovenia showed significant increases at all four benchmarks.. The Russian Federation, Germany and the Slovak Republic had increases at all except the Low International Benchmark, whereas Italy had increase at all except the Advanced International Benchmark. The improvement in Hungary was primarily at the Advanced International Benchmark, a significant 4%. A small increase can be observed in the number of Hungarian students reaching the intermediate and the average benchmark, however, the changes are not significant. At the same time, there is a 1% decrease at the low benchmark, which is also insignificant.

Exhibit 13: Trends in Percentages of Students Reaching the PIRLS 2006 International Benchmarks of Reading Achievement in 2001 and 2006

Countries	Advanced International Benchmark (625)		"High International Benchmark (550)"		Intermediate International Benchmark (475)		"Low International Benchmark (400)"	
	2006 Percent of Students	2001 Percent of Students	2006 Percent of Students	2001 Percent of Students	2006 Percent of Students	2001 Percent of Students	2006 Percent of Students	2001 Percent of Students
Singapore	19 (1,4) ●	12 (1,4)	58 (1,7) ●	45 (2,4)	86 (1,0) ●	76 (2,0)	97 (0,4) ●	90 (1,4)
2a Russian Federation	19 (1,5) ●	5 (0,9)	61 (2,0) ●	39 (2,3)	90 (1,1) ●	80 (1,9)	98 (0,5)	96 (1,2)
2a Bulgaria	16 (1,4)	17 (1,2)	52 (2,3)	54 (1,9)	82 (1,8)	83 (1,6)	95 (1,0)	95 (0,9)
England	15 (0,9) ▼	20 (1,4)	48 (1,3) ▼	54 (1,7)	78 (1,1) ▼	82 (1,2)	93 (0,7)	94 (0,7)
2a Canada, Ontario	15 (1,2)	15 (1,2)	54 (2,0)	50 (1,8)	87 (1,1) ●	84 (1,3)	98 (0,5) ●	96 (0,6)
Hong Kong SAR	15 (1,0) ●	5 (0,6)	62 (1,6) ●	39 (1,9)	92 (0,8) ●	81 (1,5)	99 (0,2) ●	97 (0,6)
Hungary	14 (0,9) ●	10 (0,9)	53 (1,8)	49 (1,8)	86 (1,4)	85 (1,0)	97 (0,5)	98 (0,3)
Italy	14 (1,4)	11 (0,9)	52 (1,8) ●	48 (1,4)	87 (1,3) ●	83 (1,2)	98 (0,4) ●	97 (0,6)
New Zealand	13 (0,7)	14 (1,2)	45 (1,0)	45 (1,6)	76 (1,0)	74 (1,4)	92 (0,6)	90 (1,0)
†2a United States	12 (1,2)	15 (1,1)	47 (2,0)	50 (2,0)	82 (1,4)	80 (1,7)	96 (0,6) ●	94 (0,7)
Germany	11 (0,9) ●	9 (0,6)	52 (1,6) ●	47 (1,3)	87 (0,8) ●	83 (0,9)	97 (0,3)	97 (0,4)
Sweden	11 (0,9) ▼	15 (1,0)	53 (1,5) ▼	59 (1,4)	88 (1,0) ▼	90 (0,8)	98 (0,4)	98 (0,3)
2b Israel	10 (1,0)	9 (0,7)	40 (1,3)	36 (1,2)	70 (1,3)	67 (1,2)	85 (1,2)	87 (1,0)
† Scotland	10 (0,8)	11 (0,9)	40 (1,4)	42 (1,9)	77 (1,4)	75 (1,5)	93 (0,8)	92 (0,9)
Latvia	8 (0,8)	9 (0,9)	46 (1,5)	49 (2,0)	86 (1,2)	87 (0,9)	98 (0,4)	99 (0,4)
Slovak Republic	8 (0,6) ●	5 (0,8)	43 (1,5) ●	34 (1,7)	80 (1,3) ●	76 (1,5)	94 (0,9)	94 (0,8)
† Netherlands	6 (0,5) ▼	10 (0,9)	49 (1,2) ▼	54 (1,8)	91 (0,8)	92 (1,0)	99 (0,2)	99 (0,3)
Canada, Quebec	6 (0,8)	8 (0,7)	41 (1,9)	43 (2,0)	83 (1,3)	84 (1,5)	97 (0,4)	98 (0,4)
Slovenia	6 (0,6) ●	3 (0,4)	37 (1,2) ●	25 (1,1)	76 (1,1) ●	67 (1,2)	94 (0,5) ●	91 (0,6)
Lithuania	5 (0,8) ▼	9 (1,0)	43 (1,3) ●	48 (1,8)	86 (0,9)	85 (1,2)	99 (0,3)	98 (0,4)
France	5 (0,6)	7 (0,8)	35 (1,2)	37 (1,4)	76 (1,2)	77 (1,2)	96 (0,4)	95 (0,6)
Romania	4 (0,5) ▼	9 (1,2)	27 (1,6) ▼	35 (2,2)	61 (2,2) ▼	69 (2,0)	84 (1,8) ▼	88 (1,3)
Iceland	3 (0,4) ▼	6 (0,5)	29 (1,1) ▼	32 (0,9)	72 (0,8)	71 (1,1)	93 (0,8)	92 (0,6)
Moldova, Rep. of	3 (0,4)	3 (0,7)	23 (1,5)	22 (2,1)	67 (1,9) ●	61 (2,1)	91 (0,9)	88 (1,2)
Macedonia, Rep. of	2 (0,4)	2 (0,3)	15 (1,1)	15 (1,1)	40 (1,7)	41 (1,9)	66 (1,6)	67 (2,1)
‡ Norway	2 (0,3) ▼	4 (0,8)	22 (1,1) ▼	28 (1,5)	67 (1,6)	65 (1,6)	92 (0,8) ●	88 (0,9)
Iran, Islamic Rep. of	1 (0,2)	0 (0,2)	8 (0,7)	7 (0,8)	30 (1,3)	28 (1,8)	60 (1,6)	56 (2,0)
Morocco	0 (0,0)	1 (0,9)	1 (0,4)	4 (1,6)	9 (1,2)	14 (2,6)	26 (2,0)	33 (3,4)
International Avg.	9 (0,2) ●	8 (0,2)	40 (0,3) ●	38 (0,3)	74 (0,3) ●	72 (0,3)	90 (0,2) ●	89 (0,2)

† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

NOTE: The International Average does not include the results from the Canadian provinces.

● 2006 percentage significantly higher.

▼ 2006 percentage significantly lower.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.





## What are the factors associated with the reading literacy of the 4<sup>th</sup>-grade students?

During the PIRLS 2006 assessment besides students' reading achievement we also measured their family & schooling background; PIRLS administered questionnaires to the students, their parents, the reading teachers working in the school and the principals. Thus we managed to identify the factors that are closely linked to the students reading abilities. In this chapter we will talk about the students' cultural and economic background, also about the reading habits of the students and their parents, the students' attitude towards reading and their self-concept, human resources in schools and the relation between all of these factors and the reading achievements.

### Attitude towards reading, self-concept and habits

In most countries one of the main themes for students in the curriculum is creating a positive attitude towards reading and a healthy reader self-image. Those students that read well and think of themselves as good readers read more often and about diverse subjects – thus they gain more reading experience and their reading abilities develop better. What we are examining at below, based on the questionnaires of the PIRLS assessment, is the students' attitude towards reading, what kind of readers they think they are, and also how often they read stories, novels or informational texts outside school. PIRLS examined not only their attitude towards reading at the time of the assessment, but also the quality and the frequency of the reading-related activities they were involved in before starting school. Our relevant findings will be presented in this chapter. Additionally, we also had a look at how the background factors are related to the students' results achieved on the PIRLS scale.

#### Attitude Towards Reading

##### *Hungary is on an Average Level*

The PIRLS Index of Students' Attitudes Toward Reading summarizes students' views on reading for enjoyment and appreciating books. The index was based on students' agreement with the following statements related to reading: I read only if I have to, I like talking about books with other people, I would be happy if someone gave me a book as a present, I think reading is boring, and I enjoy reading. The index measuring the students' attitude toward reading was created to scale these answers.

Exhibit 14 shows the percentages with high, medium and low Index of Students' Attitudes Towards Reading for each participant and how it changed between the 2001 and the 2006 assessment cycle. The PIRLS average reading achievement scale of students from each category are also indicated in the exhibit. The countries are listed according to the students' percentages with high level of index starting from high percentages to lower ones. Also, in the bottom row you can find the international average of students' percentages with high, medium and low level of the index, and also the international average of reading score for the students in the given levels.

The exhibit shows that the participating countries with the best average reading achievement do not necessarily have the students with the most positive attitudes toward reading. In both the top one third and the bottom one third of the exhibit you there are countries with good or weak average reading achievement results. Due to the cultural differences, we have to be careful with an attitude-based comparison of the countries, since the same questions are interpreted and answered differently in different cultures, even though an effort was made to ask questions that can be answered independently of cultural standing.

Exhibit 14: Index of Students' Attitudes Toward Reading (SATR) with Trends

Countries	High SATR						Medium SATR						Low SATR					
	2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001				2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001				2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			
Iran, Islamic Rep. of	77	(1,3)	437	(3,0)	6	(2,3)	21	(1,2)	382	(5,6)	-6	(2,2)	2	(0,3)	~	~	-1	(0,4)
Italy	64	(1,4)	565	(3,0)	8	(1,9)	31	(1,2)	531	(3,4)	-7	(1,7)	5	(0,5)	520	(6,1)	-1	(0,7)
Macedonia, Rep. of	63	(1,5)	471	(4,1)	1	(2,1)	35	(1,5)	407	(5,0)	-2	(2,1)	2	(0,2)	~	~	1	(0,3)
Romania	60	(1,3)	513	(5,0)	0	(2,1)	36	(1,3)	462	(6,2)	-2	(2,1)	4	(0,4)	466	(9,2)	3	(0,5)
Canada, Quebec	58	(1,5)	553	(2,8)	1	(2,0)	36	(1,2)	512	(2,6)	0	(1,8)	6	(0,6)	503	(6,7)	-1	(0,9)
Germany	58	(1,1)	569	(2,5)	8	(1,4)	35	(1,0)	533	(2,5)	-6	(1,2)	8	(0,4)	516	(4,1)	-2	(0,6)
Moldova, Rep. of	58	(1,6)	514	(3,3)	-8	(2,5)	41	(1,6)	484	(4,2)	7	(2,5)	2	(0,3)	~	~	0	(0,4)
France	57	(0,9)	542	(2,3)	0	(1,5)	38	(0,8)	498	(2,2)	0	(1,4)	4	(0,4)	485	(5,9)	1	(0,5)
Bulgaria	57	(1,4)	567	(4,3)	-3	(2,1)	37	(1,2)	527	(5,2)	1	(1,9)	6	(0,6)	509	(9,4)	2	(0,8)
Spain	56	(1,1)	528	(2,1)	0	0	40	(1,0)	497	(3,1)	0	0	4	(0,4)	492	(6,7)	0	0
Hong Kong SAR	55	(1,1)	579	(2,3)	6	(1,6)	41	(1,0)	546	(2,9)	-6	(1,5)	4	(0,3)	539	(5,0)	0	(0,4)
Trinidad and Tobago	54	(1,1)	466	(5,0)	0	0	41	(1,2)	400	(5,4)	0	0	4	(0,4)	426	(9,7)	0	0
Morocco	53	(2,0)	351	(5,8)	5	(3,0)	45	(1,9)	298	(9,3)	-4	(2,9)	2	(0,3)	~	~	-1	(1,0)
Slovenia	52	(1,1)	542	(2,0)	-7	(1,8)	40	(0,9)	501	(2,7)	5	(1,6)	8	(0,5)	493	(4,4)	1	(0,8)
Chinese Taipei	52	(1,1)	553	(2,1)	0	0	44	(1,0)	518	(2,5)	0	0	4	(0,4)	520	(6,0)	0	0
Belgium (French)	52	(1,0)	521	(2,9)	0	0	42	(0,9)	479	(2,9)	0	0	6	(0,4)	475	(5,1)	0	0
Russian Federation	50	(1,1)	581	(3,6)	-4	(2,1)	45	(1,0)	550	(3,7)	3	(1,9)	5	(0,4)	540	(5,0)	1	(0,6)
Georgia	50	(1,9)	493	(3,4)	0	0	47	(1,8)	456	(4,1)	0	0	3	(0,4)	445	(9,6)	0	0
Austria	50	(1,2)	557	(2,7)	0	0	40	(1,0)	524	(2,7)	0	0	10	(0,7)	510	(3,8)	0	0
Hungary	50	(1,3)	571	(2,9)	0	(1,8)	39	(1,2)	532	(4,3)	-1	(1,6)	11	(0,7)	531	(3,1)	1	(1,0)
Canada, British Columbia	49	(1,0)	583	(2,5)	0	0	42	(0,9)	540	(2,9)	0	0	9	(0,6)	524	(4,3)	0	0
Indonesia	49	(1,2)	432	(3,8)	0	0	50	(1,2)	383	(4,6)	0	0	1	(0,1)	~	~	0	0
New Zealand	48	(1,0)	563	(2,3)	-3	(1,7)	44	(0,9)	507	(2,6)	4	(1,6)	7	(0,4)	493	(4,7)	-1	(0,8)
Canada, Alberta	48	(1,1)	584	(2,4)	0	0	41	(0,9)	542	(2,7)	0	0	11	(0,6)	531	(3,6)	0	0
Lithuania	47	(1,1)	551	(2,1)	1	(1,8)	46	(1,0)	525	(2,0)	-2	(1,7)	7	(0,4)	520	(4,2)	0	(0,7)
Norway	47	(1,3)	519	(2,4)	3	(1,7)	45	(1,2)	487	(2,9)	-3	(1,5)	8	(0,8)	469	(5,8)	-1	(1,0)
Singapore	47	(1,0)	582	(3,1)	-7	(1,6)	45	(0,8)	541	(3,1)	3	(1,5)	8	(0,4)	527	(4,0)	4	(0,5)
Canada, Ontario	46	(1,4)	577	(2,8)	-6	(1,9)	42	(1,0)	538	(3,4)	3	(1,7)	12	(0,9)	529	(5,2)	3	(1,0)
Canada, Nova Scotia	46	(1,0)	569	(2,7)	0	0	41	(0,9)	526	(2,5)	0	0	13	(0,7)	513	(3,9)	0	0
Slovak Republic	46	(1,3)	553	(2,7)	2	(2,0)	46	(1,2)	514	(3,5)	-4	(1,7)	9	(0,6)	511	(5,6)	2	(0,8)
Sweden	45	(1,2)	571	(2,9)	-9	(1,6)	44	(1,0)	535	(2,3)	5	(1,4)	10	(0,6)	519	(3,5)	3	(0,8)
Poland	45	(1,3)	544	(2,7)	0	0	45	(1,1)	503	(2,7)	0	0	10	(0,7)	494	(4,1)	0	0
Iceland	44	(0,8)	533	(1,6)	-4	(1,3)	49	(0,8)	496	(2,0)	3	(1,3)	7	(0,4)	484	(4,4)	1	(0,6)
Israel	42	(1,2)	547	(3,7)	-2	(1,8)	49	(1,0)	495	(3,9)	1	(1,6)	9	(0,7)	519	(5,5)	1	(0,9)
Scotland	42	(1,4)	558	(3,5)	-5	(1,9)	44	(1,1)	511	(3,1)	2	(1,6)	14	(1,0)	491	(4,8)	3	(1,4)
Kuwait	41	(1,5)	386	(4,9)	0	0	55	(1,4)	313	(5,4)	0	0	4	(0,4)	277	(11,3)	0	0
England	40	(1,4)	576	(3,4)	-4	(2,0)	45	(1,1)	520	(2,7)	2	(1,7)	15	(0,8)	509	(3,7)	2	(1,1)
United States	40	(1,3)	566	(3,4)	-3	(1,7)	46	(1,1)	526	(3,7)	2	(1,4)	14	(0,7)	522	(3,4)	1	(1,2)
Luxembourg	40	(0,6)	581	(1,8)	0	0	45	(0,6)	545	(1,5)	0	0	15	(0,5)	533	(2,5)	0	0
Denmark	39	(1,3)	568	(2,7)	0	0	49	(1,1)	535	(2,7)	0	0	12	(0,7)	525	(4,7)	0	0
Netherlands	39	(1,1)	567	(2,2)	-5	(1,7)	45	(0,9)	539	(1,4)	3	(1,4)	16	(0,7)	524	(2,7)	2	(1,1)
Qatar	38	(0,6)	399	(1,9)	0	0	57	(0,6)	330	(1,5)	0	0	5	(0,3)	352	(7,0)	0	0
Belgium (Flemish)	38	(1,2)	567	(2,2)	0	0	46	(1,0)	540	(2,2)	0	0	16	(0,8)	521	(2,5)	0	0
South Africa	35	(0,9)	356	(7,6)	0	0	60	(0,9)	277	(4,7)	0	0	4	(0,3)	324	(13,0)	0	0
Latvia	33	(1,3)	564	(3,0)	-9	(2,1)	52	(1,1)	532	(2,9)	3	(1,8)	14	(0,9)	524	(3,8)	6	(1,1)
International Avg.	49	(0,2)	525	(0,5)			44	(0,2)	482	(0,6)			8	(0,1)	489	(1,0)		

Based on students' agreement with the following: I read only if I have to, I like talking about books with other people, I would be happy if someone gave me a book as a present, I think reading is boring, and I enjoy reading. Average is computed on a 4-point scale: Disagree a lot = 1, Disagree a little = 2, Agree a little = 3, and Agree a lot = 4. Responses for negative statements were reverse-coded. High level indicates an average of greater than 3 through 4. Medium level indicates an average of 2 through 3. Low level indicates an average of 1 to less than 2.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A tilde (~) indicates insufficient data to report achievement.

A diamond (0) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Looking at the percentages of students in each level, the Hungarian results are around the international average, though there are more students with low and a bit less students with medium level of index in Hungary. About 50% percent of the Hungarian students have a high level of attitude towards reading, their average score is 571 points on the PIRLS reading achievement scale. 39% of the Hungarian students are in the medium category, which is 5% lower than the international average; the average result of the students in this category is 532 points. The 11% of the students are in the low category (the international average is 8%), and their average result is surprisingly high, 531 points, which does not differ significantly from the average of the students with medium level of attitude. The distribution of the students was nearly the same in the 2001 assessment, there is no significant change.

On average internationally, and in every country, students at the high level of index of positive attitudes toward reading had substantially higher average reading achievement than those at the medium or the low level. However, the difference in average reading achievement between the medium and the low levels is not so clear. On the contrary, in the case of four countries (Trinidad and Tobago, Israel, Qatar and the South-African Republic) the average reading achievement of the students with low level is significantly higher. At the same time, there is no significant difference between the results of the two levels in many of the countries; this is true about Hungary and also, for example, about Lithuania, Slovakia, the United States and Taiwan.

## Reading Self-Concept

### On the Level of the International Average

Similarly in the 2001 assessment, students in all countries could give an indication of their perception of themselves as good or poor readers in 2006. In the Student Questionnaire they needed to mark on a four-level scale how much they agree with the following statements: reading is very easy for me, I do not read as well as other students in my class, when I am reading by myself I understand almost everything I read; I read slower than other students in my class. These answers make up the Index of Students' Reading Self-Concept. The students were put into three levels based on their index values (high, medium, low). Exhibit 15 presents the results. The Exhibit shows that, as opposed to the Index of Students' Attitude Toward Reading, there is a more direct link between the students' reading self-concept and their average reading achievement. In each country, students at the high level achieved better results on the average reading achievement scale in general. However, similarly to the students' attitude index, countries with better average reading achievement do not necessarily have students with better reading self-concept

The distribution of the students in the high category in Hungary is 45%, which is 4% behind the international average. From the Central and Eastern European countries only students in Lithuania and Moldavia evaluated themselves lower in relation to their reading self-concept. The average achievement of our students in the high category, just as the overall average achievement of Hungary, is one of the highest among the participating countries, 579 points. 51% of the Hungarian students fall into the medium category, which is significantly higher than the international 48%; the average achievement result of the students in this category is 531 points. In the low category, 4% of the Hungarian students can be found which is not significantly different from the international average of 3%. But even here, the 495-point average reading achievement of the Hungarian students is better than the international average. It deserves attention that compared to the findings in 2001, this is the only category where the distribution of the students increased significantly; 2% more Hungarian students thought they read badly than 5 years before.

Exhibit 15: Index of Students' Reading Self-Concept (SRSC) with Trends

Countries	High SATR					Medium SATR					Low SATR				
	2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001		
Israel	63	(0,9)	544	(2,8)	2 (1,3)	36	(0,9)	477	(4,6)	-2 (1,3)	1	(0,2)	~	~	0 (0,3)
Austria	62	(0,9)	553	(2,4)	0 0	36	(0,9)	517	(2,7)	0 0	2	(0,3)	~	~	0 0
Sweden	62	(0,9)	569	(2,2)	-2 (1,3)	37	(0,9)	523	(3,0)	1 (1,3)	2	(0,2)	~	~	1 (0,3)
Poland	61	(0,9)	547	(2,2)	0 0	36	(0,8)	483	(3,3)	0 0	2	(0,3)	~	~	0 0
Norway	61	(1,2)	518	(2,4)	5 (1,6)	37	(1,2)	477	(3,5)	-5 (1,6)	2	(0,3)	~	~	0 (0,4)
Netherlands	60	(0,9)	560	(1,8)	4 (1,3)	36	(0,9)	531	(2,2)	-7 (1,2)	4	(0,4)	508	(5,8)	2 (0,5)
Denmark	60	(0,9)	574	(2,2)	0 0	38	(0,9)	511	(3,1)	0 0	3	(0,3)	442	(8,9)	0 0
Slovenia	58	(1,0)	545	(2,1)	0 (1,5)	40	(1,0)	491	(2,4)	-1 (1,5)	2	(0,2)	~	~	1 (0,4)
Iceland	58	(0,8)	534	(1,5)	3 (1,2)	40	(0,9)	484	(2,1)	-3 (1,2)	2	(0,3)	~	~	1 (0,4)
Germany	58	(0,9)	571	(2,4)	5 (1,2)	40	(0,9)	529	(2,2)	-6 (1,2)	2	(0,2)	~	~	1 (0,3)
Bulgaria	58	(1,4)	570	(3,9)	0 (2,0)	38	(1,3)	523	(5,6)	-3 (1,9)	4	(0,6)	482	(14,2)	3 (0,7)
Italy	56	(1,1)	569	(3,2)	6 (1,7)	41	(1,1)	534	(2,9)	-7 (1,7)	3	(0,3)	496	(9,2)	1 (0,4)
Macedonia, Rep. of	55	(1,3)	486	(3,9)	-9 (1,8)	44	(1,2)	401	(4,6)	8 (1,7)	1	(0,2)	~	~	0 (0,3)
Iran, Islamic Rep. of	54	(1,2)	458	(3,3)	3 (2,1)	44	(1,2)	383	(3,8)	-3 (2,1)	2	(0,2)	~	~	0 (0,3)
Canada, British Columbia	54	(0,9)	584	(2,5)	0 0	43	(0,9)	533	(3,0)	0 0	2	(0,3)	~	~	0 0
Qatar	54	(0,6)	400	(1,7)	0 0	43	(0,6)	309	(1,7)	0 0	3	(0,2)	279	(9,6)	0 0
Canada, Alberta	53	(0,9)	584	(2,8)	0 0	44	(0,9)	538	(2,5)	0 0	3	(0,3)	505	(6,6)	0 0
Russian Federation	53	(1,1)	584	(3,5)	15 (1,7)	45	(0,9)	546	(3,8)	-15 (1,5)	2	(0,3)	~	~	0 (0,4)
Canada, Nova Scotia	52	(0,9)	572	(2,4)	0 0	45	(0,9)	518	(2,3)	0 0	3	(0,3)	469	(7,5)	0 0
United States	51	(0,8)	566	(3,5)	-6 (1,5)	44	(0,8)	518	(3,9)	5 (1,4)	4	(0,3)	495	(5,9)	1 (0,6)
Belgium (Flemish)	51	(1,0)	565	(2,0)	0 0	44	(1,0)	532	(2,3)	0 0	5	(0,4)	502	(4,3)	0 0
Georgia	51	(1,3)	498	(3,2)	0 0	46	(1,2)	450	(3,7)	0 0	4	(0,6)	428	(14,8)	0 0
Canada, Ontario	51	(1,0)	579	(2,8)	-5 (1,5)	46	(1,0)	533	(3,5)	4 (1,5)	3	(0,3)	494	(7,8)	1 (0,5)
Luxembourg	50	(0,7)	582	(1,3)	0 0	46	(0,7)	535	(1,5)	0 0	4	(0,3)	497	(4,5)	0 0
Romania	50	(1,4)	524	(4,2)	-4 (1,9)	45	(1,3)	467	(5,6)	0 (1,8)	5	(0,7)	416	(10,6)	4 (0,8)
Canada, Quebec	50	(1,3)	560	(2,5)	-9 (1,8)	46	(1,2)	515	(3,1)	6 (1,7)	4	(0,5)	463	(6,8)	2 (0,6)
Trinidad and Tobago	49	(1,4)	482	(3,7)	0 0	47	(1,3)	399	(5,8)	0 0	4	(0,6)	338	(16,4)	0 0
Spain	48	(1,0)	535	(2,6)	0 0	50	(1,0)	495	(2,7)	0 0	2	(0,2)	~	~	0 0
Hong Kong SAR	48	(0,9)	585	(1,9)	9 (1,3)	50	(0,9)	545	(2,7)	-7 (1,3)	2	(0,2)	~	~	-1 (0,4)
Hungary	45	(1,3)	579	(2,7)	-2 (1,6)	51	(1,1)	531	(3,3)	1 (1,4)	4	(0,4)	495	(7,7)	2 (0,5)
Chinese Taipei	45	(0,9)	560	(2,1)	0 0	51	(0,9)	518	(2,2)	0 0	4	(0,3)	494	(5,9)	0 0
Singapore	45	(0,9)	583	(2,9)	-2 (1,4)	52	(0,8)	542	(3,0)	2 (1,3)	3	(0,2)	489	(6,4)	0 (0,4)
Latvia	43	(1,2)	567	(2,6)	9 (1,5)	53	(1,2)	523	(3,0)	-9 (1,6)	3	(0,4)	498	(7,0)	1 (0,5)
Slovak Republic	43	(0,9)	562	(2,4)	0 (1,6)	54	(0,9)	512	(3,3)	-2 (1,5)	4	(0,3)	459	(7,0)	2 (0,5)
Scotland	43	(1,1)	556	(3,7)	-1 (1,7)	52	(1,1)	512	(2,9)	-1 (1,6)	6	(0,5)	457	(5,1)	2 (0,6)
England	42	(1,1)	578	(3,5)	-3 (1,6)	51	(1,1)	519	(2,7)	0 (1,6)	7	(0,5)	468	(7,0)	3 (0,7)
Lithuania	40	(0,9)	561	(2,1)	5 (1,4)	57	(0,8)	523	(1,9)	-6 (1,3)	3	(0,3)	493	(6,8)	1 (0,5)
Kuwait	38	(1,3)	384	(5,2)	0 0	59	(1,2)	318	(5,0)	0 0	3	(0,3)	247	(11,6)	0 0
Morocco	38	(1,6)	354	(5,8)	-8 (2,4)	59	(1,6)	309	(7,6)	9 (2,3)	3	(0,5)	276	(22,0)	-1 (1,1)
Belgium (French)	38	(0,9)	526	(3,1)	0 0	58	(0,8)	487	(2,7)	0 0	4	(0,5)	454	(6,1)	0 0
New Zealand	36	(0,8)	574	(2,2)	-9 (1,3)	60	(0,8)	513	(2,4)	8 (1,3)	4	(0,3)	459	(6,1)	1 (0,5)
France	36	(0,8)	549	(3,1)	3 (1,3)	60	(0,9)	510	(1,9)	-4 (1,3)	4	(0,3)	472	(5,1)	1 (0,4)
Indonesia	34	(1,3)	426	(3,8)	0 0	65	(1,2)	398	(4,7)	0 0	1	(0,3)	~	~	0 0
Moldova, Rep. of	32	(1,3)	525	(3,6)	-11 (2,1)	65	(1,3)	490	(3,4)	11 (2,1)	3	(0,4)	469	(10,7)	-1 (0,7)
South Africa	31	(0,8)	369	(6,6)	0 0	64	(0,8)	282	(5,3)	0 0	4	(0,3)	232	(6,6)	0 0
International Avg.	49	(0,2)	529	(0,5)		48	(0,2)	479	(0,6)		3	(0,1)	436	(1,9)	

Based on students' responses to the following: reading is very easy for me, I do not read as well as other students in my class, when I am reading by myself I understand almost everything I read, and I read slower than other students in my class. Average is computed on a 4-point scale: Disagree a lot = 1, Disagree a little = 2, Agree a little = 3, and Agree a lot = 4. Responses for negative statements were reverse-coded. High indicates an average of greater than 3 through 4. Medium indicates an average of 2 through 3. Low indicates an average of 1 to less than 2.

Please note that "I read slower than other students in my class" is a new variable added to the index in PIRLS 2006, and is not a part of the PIRLS 2001 index calculations.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A tilde (~) indicates insufficient data to report achievement. A diamond (0) indicates the country did not participate in the 2001 assessment.

0 Percent in 2006 significantly higher.

▼ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

## Reading outside of School

### Hungarian students read more than students on average internationally

In the Student Questionnaire, the students were asked how often they read stories, novels and other literary pieces that are not part of the curriculum. They could choose from four categories: every day or almost every day, once or twice a week, once or twice a month, never or almost never. Exhibit 16 shows the distribution of the students in each country choosing between these four categories. If the country participated in the 2001 assessment, the change in percentage is indicated in a separate column.

On average 32% of the students in the participating educational systems answered that they read literary pieces every day or nearly every day outside of school, while 31% pick up such books at least once or

twice a week. At the same time, 36% of the Hungarian students read literary pieces every day and 34% of them read them weekly, which percentages are significantly higher than the international averages. Compared to the values of 2001 the number of those who read literary pieces every day increased with 3% while the percentage of students reading weekly did not change significantly. Out of the post-socialist countries it is only Russia and Macedonia that outperformed our country, 82% and 79% of the students answered that they read literary pieces at least once a week. Poland's results are similar to ours; this statement is true about 68% of their students. Slovakian students read the least often, only 36% of them answered that they read literary pieces outside of school once a day or a week.

Looking at the percentages of those who read less often, we find that 20% of the Hungarian 4<sup>th</sup>-graders read literary pieces less than weekly but at least once or twice a month, which is higher than the international average (18%), while 10% of them never reads short stories or novels out of their own free will, which is well below the international average of 19%. The distribution of the students that read every month and those that never read both dropped with 2% compared to the findings of the 2001 assessment, but in the later category this decrease is not significant.

When we look at the relationship between how often the students read literary pieces and their average reading achievement, we can see that students who read more often generally have better results on the international scale. The average of those who read every day or almost every day is 512 points, 503 of those who read weekly, 500 of those who read monthly and finally 479 points of those who read very rarely. So, the difference is the biggest between those who read very seldom and those who read monthly; reading more frequently than monthly causes a smaller but still visible increase in the students' reading achievement.. On the other hand, the average achievement of the Hungarian students who read more often than a month did not increase significantly. In all three categories the average reading achievement on the PIRLS scale is 553-554 points in contrast with the 535 points average of the students who read very rarely (which is still above the 500-point average of the PIRLS scale).

Students read not only literary pieces outside of school, but also other informational pieces, like newspapers, handbooks, manuals and magazines. Exhibit 17 shows what percentage of the 4<sup>th</sup>-grade students of participating countries read such texts daily, weekly, monthly or even more rarely?

If we examine the percentage of the student reading informational texts daily or weekly on an international level, it turns out that less students read such texts daily (16%) or weekly (43%) than literary texts. 29% of the students read informational texts on a monthly basis, and 12% of them almost never read such texts.

In Hungary, almost one fifth of the 4<sup>th</sup>-grade students (19%) read informational texts outside of school daily, and half of the students read informational texts outside of school on a weekly basis. Both percentages are significantly above the international average, there are only few countries where there were higher percentages of students in these two categories. We need to mention that in Hungary there was a 4% significant increase in the percentage of students who read such texts on a weekly basis. In Hungary, 25% of the students read informational texts monthly and 7% read them very rarely, which is still below the international average – in accordance with the higher percent in the more frequent readers' categories. The percentage of those who read monthly dropped with 3% compared to 2001.

The link between literacy abilities and the frequency of reading informational texts on international level is not as evident as the one we observed with literary texts. On the international level, the results of those who read daily is the weakest, 492 points, followed by those who almost never read, 496 points; the average result of those who read weekly is 503 points, and of those who read monthly is 506. Similarly, in Hungary, the weakest results, 533 points, were achieved by those who read such texts the most frequently, followed by those who read on a weekly basis with 552 points. Those who read very rarely achieved 558 points and those who read monthly had 562 points.



Exhibit 16: Students Reading Stories or Novels Outside of School with Trends

Countries	Every Day or Almost Every Day						Once or Twice a Week					
	2006 Percent of Students		Average Achievement		Difference in Percent from 2001		2006 Percent of Students		Average Achievement		Difference in Percent from 2001	
Canada, British Columbia	57	(1,2)	572	(2,5)	0	0	26	(0,7)	552	(3,2)	0	0
Canada, Nova Scotia	54	(1,0)	557	(2,4)	0	0	26	(0,8)	534	(2,9)	0	0
Canada, Alberta	53	(1,2)	577	(2,7)	0	0	27	(0,9)	549	(3,5)	0	0
Canada, Ontario	50	(1,7)	566	(3,2)	0	(2,0)	28	(1,4)	548	(3,0)	0	(1,7)
Russian Federation	50	(1,1)	568	(3,6)	-6	(1,9)	32	(0,7)	565	(3,6)	3	(1,3)
Trinidad and Tobago	47	(1,4)	452	(5,8)	0	0	31	(1,3)	431	(6,6)	0	0
New Zealand	46	(1,1)	556	(2,3)	0	(1,9)	29	(0,8)	526	(2,6)	-1	(1,4)
Israel	46	(1,0)	532	(4,2)	16	(1,5)	32	(0,8)	513	(3,8)	6	(1,3)
Netherlands	45	(1,0)	558	(2,0)	-3	(1,5)	28	(0,7)	542	(1,8)	2	(1,1)
Singapore	44	(1,1)	579	(3,0)	-9	(1,6)	33	(0,8)	555	(3,1)	6	(1,1)
Macedonia, Rep. of	44	(1,5)	442	(5,1)	-4	(2,1)	35	(1,3)	449	(5,0)	1	(1,8)
Canada, Quebec	44	(1,4)	546	(3,3)	5	(1,9)	28	(0,8)	530	(3,1)	-1	(1,3)
Iceland	42	(0,9)	522	(2,4)	-2	(1,1)	27	(0,8)	512	(2,3)	1	(1,0)
South Africa	39	(1,0)	308	(7,0)	0	0	33	(0,6)	310	(6,7)	0	0
Qatar	37	(0,6)	361	(2,1)	0	0	37	(0,6)	359	(2,0)	0	0
United States	36	(1,3)	558	(4,6)	2	(2,0)	28	(0,8)	541	(3,6)	-1	(1,3)
Hungary	36	(1,2)	554	(4,6)	3	(1,5)	34	(0,9)	553	(3,5)	1	(1,3)
Hong Kong SAR	36	(0,9)	575	(2,4)	16	(1,3)	40	(0,8)	568	(2,6)	-5	(1,2)
Scotland	35	(1,3)	555	(4,2)	-5	(1,8)	29	(0,9)	525	(3,3)	-2	(1,4)
Kuwait	33	(1,2)	351	(5,2)	0	0	40	(1,0)	337	(4,9)	0	0
England	33	(1,2)	573	(3,9)	-5	(1,8)	30	(1,0)	535	(3,2)	-1	(1,4)
Germany	32	(0,7)	566	(3,0)	5	(1,0)	21	(0,8)	547	(3,7)	0	(1,1)
France	32	(1,0)	533	(2,9)	2	(1,5)	30	(0,8)	524	(2,3)	1	(1,2)
Georgia	32	(1,5)	467	(3,5)	0	0	32	(1,3)	479	(3,5)	0	0
Belgium (Flemish)	31	(0,9)	557	(2,8)	0	0	34	(0,9)	546	(2,4)	0	0
Spain	31	(1,1)	511	(3,7)	0	0	24	(0,8)	515	(3,0)	0	0
Poland	31	(1,1)	524	(3,3)	0	0	37	(1,2)	524	(3,1)	0	0
Sweden	30	(0,9)	564	(3,2)	-3	(1,3)	33	(0,9)	549	(3,4)	-1	(1,2)
Chinese Taipei	30	(0,8)	549	(2,7)	0	0	36	(0,9)	541	(2,4)	0	0
Denmark	29	(1,1)	558	(3,2)	0	0	26	(0,8)	548	(3,2)	0	0
Belgium (French)	28	(0,9)	509	(3,7)	0	0	27	(0,8)	498	(3,5)	0	0
Lithuania	28	(1,0)	542	(2,5)	1	(1,6)	30	(0,9)	538	(2,5)	-1	(1,3)
Morocco	27	(1,2)	334	(6,2)	9	(1,6)	36	(1,5)	334	(6,3)	2	(2,2)
Romania	27	(1,4)	491	(6,1)	7	(1,9)	34	(1,3)	497	(5,8)	-4	(1,9)
Iran, Islamic Rep. of	25	(0,9)	435	(5,8)	2	(1,3)	43	(1,3)	429	(3,6)	1	(1,6)
Luxembourg	24	(0,6)	587	(2,6)	0	0	24	(0,6)	554	(2,6)	0	0
Norway	23	(1,1)	509	(3,2)	5	(1,4)	24	(0,9)	501	(3,5)	-1	(1,2)
Austria	23	(0,9)	554	(3,0)	0	0	23	(0,8)	541	(3,0)	0	0
Indonesia	22	(1,0)	399	(4,8)	0	0	36	(1,1)	413	(4,4)	0	0
Bulgaria	22	(1,0)	558	(6,4)	-6	(1,6)	26	(1,0)	555	(4,9)	-2	(1,5)
Italy	22	(1,2)	573	(4,4)	7	(1,4)	20	(1,0)	556	(3,3)	2	(1,2)
Slovenia	21	(0,8)	536	(3,0)	-5	(1,4)	29	(0,8)	520	(3,0)	2	(1,3)
Moldova, Rep. of	19	(1,0)	499	(4,4)	-4	(1,8)	37	(1,2)	503	(3,7)	-7	(2,2)
Latvia	19	(0,9)	558	(4,0)	-4	(1,3)	25	(1,1)	548	(3,6)	-2	(1,4)
Slovak Republic	15	(0,7)	540	(4,5)	0	(1,1)	21	(0,9)	536	(3,5)	0	(1,3)
International Avg.	32	(0,2)	512	(0,6)			31	(0,2)	503	(0,6)		

● Percent in 2006 significantly higher  
 ▼ Percent in 2006 significantly lower

continued



Exhibit 16: Students Reading Stories or Novels Outside of School with Trends (Continued)

Countries	Once or Twice a Month						Never or Almost Never					
	2006 Percent of Students		Average Achievement		Difference in Percent from 2001		2006 Percent of Students		Average Achievement		Difference in Percent from 2001	
Canada, British Columbia	11	(0,7)	539	(4,1)	0	0	6	(0,6)	511	(7,0)	0	0
Canada, Nova Scotia	12	(0,5)	531	(3,9)	0	0	8	(0,5)	497	(6,3)	0	0
Canada, Alberta	12	(0,7)	544	(3,4)	0	0	8	(0,6)	523	(4,9)	0	0
Canada, Ontario	14	(0,9)	544	(5,1)	0	(1,1)	7	(0,7)	520	(7,5)	1	(1,0)
Russian Federation	11	(0,6)	563	(4,9)	2	(0,9)	7	(0,6)	548	(5,4)	1	(0,8)
Trinidad and Tobago	10	(0,6)	420	(7,1)	0	0	11	(1,0)	408	(7,2)	0	0
New Zealand	14	(0,6)	513	(3,9)	1	(1,0)	10	(0,6)	473	(4,2)	0	(1,0)
Israel	15	(0,6)	495	(4,8)	1	(0,9)	7	(0,5)	481	(7,2)	-22	(1,4)
Netherlands	13	(0,6)	540	(2,2)	0	(0,9)	14	(0,7)	531	(3,2)	0	(1,1)
Singapore	15	(0,5)	534	(3,5)	4	(0,7)	8	(0,4)	505	(4,6)	-1	(0,7)
Macedonia, Rep. of	16	(1,1)	452	(7,1)	2	(1,6)	5	(0,4)	445	(10,1)	1	(0,6)
Canada, Quebec	16	(0,9)	528	(3,4)	-1	(1,3)	12	(0,9)	502	(5,1)	-4	(1,6)
Iceland	16	(0,6)	508	(2,8)	2	(0,8)	15	(0,6)	486	(2,9)	-1	(0,8)
South Africa	14	(0,5)	302	(6,6)	0	0	13	(0,7)	294	(7,2)	0	0
Qatar	15	(0,4)	347	(3,4)	0	0	10	(0,4)	342	(4,4)	0	0
United States	18	(0,7)	539	(3,6)	1	(1,0)	18	(0,9)	509	(3,2)	-3	(1,3)
Hungary	20	(0,9)	553	(2,9)	-2	(1,2)	10	(0,7)	535	(6,7)	-2	(1,0)
Hong Kong SAR	17	(0,7)	550	(3,3)	-6	(1,0)	7	(0,5)	518	(5,0)	-5	(0,8)
Scotland	18	(0,9)	521	(3,8)	3	(1,2)	17	(1,2)	484	(4,8)	5	(1,5)
Kuwait	19	(0,8)	326	(5,8)	0	0	8	(0,7)	312	(8,9)	0	0
England	20	(0,7)	536	(4,2)	3	(1,0)	17	(0,8)	492	(3,5)	3	(1,2)
Germany	16	(0,5)	550	(3,6)	1	(0,8)	31	(0,9)	535	(2,6)	-6	(1,4)
France	19	(0,6)	522	(2,8)	-1	(0,9)	19	(0,9)	501	(2,9)	-2	(1,3)
Georgia	20	(1,4)	484	(6,8)	0	0	17	(1,2)	459	(5,6)	0	0
Belgium (Flemish)	21	(0,8)	545	(3,0)	0	0	14	(0,8)	530	(3,3)	0	0
Spain	15	(0,6)	523	(3,7)	0	0	29	(1,0)	508	(3,2)	0	0
Poland	21	(0,8)	516	(3,7)	0	0	11	(0,8)	504	(4,6)	0	0
Sweden	22	(0,8)	546	(2,7)	0	(1,0)	15	(0,8)	529	(3,4)	3	(1,0)
Chinese Taipei	20	(0,7)	531	(3,2)	0	0	15	(0,7)	505	(3,1)	0	0
Denmark	20	(0,8)	551	(3,0)	0	0	25	(1,1)	529	(3,0)	0	0
Belgium (French)	18	(0,7)	507	(3,3)	0	0	27	(0,9)	488	(3,0)	0	0
Lithuania	19	(0,7)	540	(2,6)	-1	(1,2)	23	(1,0)	528	(2,4)	1	(1,5)
Morocco	21	(1,5)	327	(10,2)	-4	(1,9)	16	(2,5)	282	(16,8)	-8	(3,5)
Romania	23	(1,3)	503	(5,8)	-4	(1,8)	16	(1,1)	463	(9,8)	2	(1,7)
Iran, Islamic Rep. of	22	(0,9)	423	(4,3)	1	(1,3)	10	(1,0)	356	(9,3)	-5	(1,6)
Luxembourg	21	(0,5)	553	(2,4)	0	0	31	(0,6)	539	(1,8)	0	0
Norway	21	(0,8)	503	(5,1)	1	(1,2)	32	(1,2)	488	(3,5)	-5	(1,8)
Austria	18	(0,7)	537	(3,8)	0	0	37	(1,1)	528	(2,6)	0	0
Indonesia	16	(0,7)	411	(5,7)	0	0	25	(1,2)	406	(6,0)	0	0
Bulgaria	23	(1,0)	555	(6,0)	2	(1,4)	29	(1,3)	529	(5,2)	7	(2,0)
Italy	15	(0,8)	554	(4,1)	-1	(1,0)	43	(1,3)	540	(3,3)	-7	(1,7)
Slovenia	23	(0,8)	522	(3,0)	4	(1,3)	28	(0,9)	513	(2,5)	0	(1,7)
Moldova, Rep. of	23	(0,9)	504	(4,1)	0	(1,8)	21	(1,1)	493	(4,4)	11	(1,6)
Latvia	21	(0,9)	544	(3,6)	1	(1,2)	36	(1,4)	526	(2,5)	6	(1,7)
Slovak Republic	21	(0,7)	540	(3,7)	-1	(1,1)	43	(1,1)	522	(3,9)	1	(1,7)
International Avg.	18	(0,1)	500	(0,7)			19	(0,2)	479	(0,9)		

Background data provided by students.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A diamond (◊) indicates the country did not participate in the 2001 assessment

● Percent in 2006 significantly higher

◉ Percent in 2006 significantly lower

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006



Exhibit 17: Students Reading for Information Outside of School with Trends

Countries	Every Day or Almost Every Day						Once or Twice a Week					
	2006 Percent of Students		Average Achievement		Difference in Percent from 2001		2006 Percent of Students		Average Achievement		Difference in Percent from 2001	
South Africa	36	(1,1)	302	(6,0)	0	0	45	(0,7)	307	(5,8)	0	0
Macedonia, Rep. of	33	(1,3)	440	(5,4)	-3	(1,9)	48	(1,1)	453	(4,4)	1	(1,7)
Qatar	33	(0,6)	359	(1,9)	0	0	49	(0,6)	355	(1,7)	0	0
Kuwait	30	(1,4)	342	(5,6)	0	0	50	(1,1)	343	(4,5)	0	0
Trinidad and Tobago	29	(1,4)	440	(6,2)	0	0	48	(1,2)	435	(5,9)	0	0
Israel	21	(0,8)	499	(5,4)	-1	(1,3)	44	(1,0)	510	(4,0)	1	(1,4)
Poland	21	(0,8)	523	(2,9)	0	0	46	(0,9)	522	(3,3)	0	0
Slovak Republic	20	(1,0)	527	(4,2)	1	(1,3)	50	(0,9)	539	(2,5)	0	(1,4)
Moldova, Rep. of	19	(1,0)	497	(4,0)	1	(1,8)	50	(1,3)	503	(3,9)	5	(2,3)
Indonesia	19	(0,9)	409	(5,4)	0	0	50	(1,1)	409	(4,4)	0	0
Hungary	19	(0,9)	533	(4,6)	0	(1,2)	50	(0,9)	552	(3,5)	4	(1,3)
Russian Federation	18	(0,9)	555	(4,2)	-2	(1,4)	47	(0,7)	564	(3,7)	-1	(1,4)
Slovenia	18	(0,6)	510	(3,3)	-5	(1,3)	49	(0,9)	519	(2,6)	2	(1,4)
Lithuania	18	(0,8)	530	(3,3)	-4	(1,3)	53	(0,9)	538	(1,9)	1	(1,3)
Bulgaria	17	(1,1)	544	(6,7)	-10	(1,6)	47	(1,5)	556	(4,5)	2	(1,9)
Romania	16	(1,0)	493	(6,1)	-3	(1,7)	49	(1,4)	500	(5,4)	1	(1,9)
Singapore	16	(0,5)	558	(3,5)	-8	(0,9)	47	(0,8)	561	(3,2)	0	(1,0)
Latvia	16	(0,8)	530	(4,8)	-3	(1,3)	48	(0,9)	541	(2,9)	-3	(1,7)
Georgia	16	(1,3)	465	(4,5)	0	0	43	(1,3)	480	(3,0)	0	0
Germany	15	(0,6)	536	(3,3)	1	(0,9)	40	(0,8)	551	(3,1)	2	(1,2)
Austria	15	(0,7)	526	(3,3)	0	0	43	(1,0)	540	(2,7)	0	0
Spain	14	(0,8)	501	(3,6)	0	0	45	(1,1)	513	(3,0)	0	0
New Zealand	14	(0,6)	514	(4,5)	-1	(1,1)	43	(0,8)	534	(2,2)	1	(1,3)
United States	14	(0,6)	519	(4,5)	-4	(1,1)	43	(0,9)	538	(3,5)	-1	(1,3)
Scotland	13	(0,8)	506	(5,2)	-1	(1,1)	42	(1,0)	527	(3,6)	-1	(1,5)
Morocco	13	(1,2)	324	(7,5)	2	(1,7)	45	(1,6)	326	(6,8)	5	(2,4)
Belgium (French)	13	(0,7)	480	(4,6)	0	0	40	(0,8)	498	(2,9)	0	0
France	12	(0,7)	506	(4,0)	1	(0,9)	40	(0,8)	520	(2,2)	1	(1,2)
Hong Kong SAR	12	(0,5)	554	(4,0)	4	(0,7)	43	(0,8)	569	(2,6)	0	(1,2)
Canada, Nova Scotia	12	(0,6)	523	(4,5)	0	0	42	(1,0)	545	(2,6)	0	0
Iran, Islamic Rep. of	11	(0,8)	435	(6,7)	-2	(1,1)	40	(1,5)	436	(3,8)	1	(2,1)
Norway	11	(0,7)	485	(4,7)	0	(1,0)	38	(0,9)	499	(2,7)	0	(1,4)
Italy	11	(0,8)	539	(6,3)	-1	(1,1)	40	(0,8)	554	(3,1)	1	(1,2)
Canada, Ontario	11	(0,9)	532	(6,2)	-3	(1,2)	40	(1,5)	554	(3,1)	-1	(1,8)
Canada, Alberta	10	(0,6)	543	(4,2)	0	0	43	(0,9)	560	(2,7)	0	0
England	10	(0,7)	502	(5,5)	-2	(1,0)	44	(1,0)	537	(2,8)	0	(1,5)
Canada, Quebec	10	(0,6)	520	(3,9)	-2	(1,0)	37	(1,1)	532	(3,3)	-6	(1,5)
Sweden	9	(0,7)	539	(6,0)	2	(0,8)	33	(1,0)	550	(2,8)	2	(1,3)
Canada, British Columbia	9	(0,6)	541	(5,3)	0	0	39	(1,0)	557	(3,3)	0	0
Chinese Taipei	8	(0,4)	538	(3,6)	0	0	38	(0,8)	538	(2,2)	0	0
Iceland	8	(0,4)	496	(4,9)	-1	(0,7)	33	(0,8)	511	(2,0)	0	(1,1)
Denmark	6	(0,5)	526	(5,7)	0	0	30	(1,0)	539	(3,1)	0	0
Luxembourg	6	(0,3)	542	(4,1)	0	0	33	(0,6)	555	(2,0)	0	0
Belgium (Flemish)	4	(0,4)	532	(5,7)	0	0	29	(1,0)	544	(2,8)	0	0
Netherlands	4	(0,4)	528	(6,0)	0	(0,6)	25	(1,0)	542	(2,3)	1	(1,2)
International Avg.	16	(0,1)	492	(0,8)			43	(0,2)	503	(0,6)		

Based on students' responses on how often they read to find out about things they want to learn and how often they read the following things outside of school: books that explain things, magazines, newspapers, directions or instructions, and brochures and catalogs. Average is computed on a 4-point scale: Never or almost never = 1, Once or twice a month = 2, Once or twice a week = 3, and Every day or almost every day = 4. Every day or almost every day indicates an average of greater than 3.25 through 4. Once or twice a week indicates an average of greater than 2.5 through 3.25. Once or twice a month indicates an average of greater than 1.75 through 2.5. Never or almost never indicates an average of 1 to less than 1.75.

Please note that "I read brochures and catalogs" is a new item added to the index in 2006, and is not included in the 2001 index calculations.

● Percent in 2006 significantly higher.

▼ Percent in 2006 significantly lower.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

continued



Exhibit 17: Students Reading for Information Outside of School with Trends (Continued)

Countries	Once or Twice a Month						Never or Almost Never					
	2006 Percent of Students		Average Achievement		Difference in Percent from 2001		2006 Percent of Students		Average Achievement		Difference in Percent from 2001	
South Africa	16	(0,8)	317	(10,1)	0	0	3	(0,5)	304	(19,7)	0	0
Macedonia, Rep. of	16	(1,2)	447	(6,3)	2	(1,5)	2	(0,3)	~	~	0	(0,6)
Qatar	15	(0,4)	359	(3,5)	0	0	3	(0,2)	345	(7,6)	0	0
Kuwait	16	(0,9)	329	(6,4)	0	0	3	(0,6)	295	(15,3)	0	0
Trinidad and Tobago	18	(0,8)	444	(5,8)	0	0	4	(0,5)	414	(13,6)	0	0
Israel	25	(1,0)	532	(3,9)	-1	(1,3)	10	(0,6)	549	(5,1)	2	(0,8)
Poland	27	(0,7)	518	(3,4)	0	0	6	(0,5)	508	(6,8)	0	0
Slovak Republic	24	(0,8)	530	(4,3)	-2	(1,2)	6	(0,6)	492	(15,3)	1	(0,8)
Moldova, Rep. of	24	(1,3)	500	(4,3)	-5	(2,1)	7	(0,9)	492	(8,7)	0	(1,4)
Indonesia	25	(1,0)	407	(5,1)	0	0	6	(0,9)	391	(8,0)	0	0
Hungary	25	(0,8)	562	(3,4)	-3	(1,3)	7	(0,5)	558	(6,4)	0	(0,7)
Russian Federation	28	(0,9)	572	(3,5)	1	(1,3)	7	(0,5)	570	(5,6)	2	(0,9)
Slovenia	26	(0,7)	533	(2,9)	1	(1,2)	8	(0,5)	524	(4,9)	2	(0,7)
Lithuania	25	(0,8)	541	(2,4)	0	(1,4)	4	(0,4)	533	(4,7)	3	(0,4)
Bulgaria	25	(1,2)	550	(4,3)	4	(1,6)	11	(1,3)	521	(9,6)	4	(1,6)
Romania	26	(1,1)	490	(5,5)	-3	(1,7)	9	(1,0)	444	(12,7)	5	(1,1)
Singapore	28	(0,7)	561	(3,4)	4	(0,9)	8	(0,3)	538	(4,4)	4	(0,4)
Latvia	29	(0,9)	547	(2,9)	4	(1,7)	7	(0,6)	545	(5,1)	3	(0,7)
Georgia	30	(1,5)	475	(4,7)	0	0	11	(1,0)	450	(10,3)	0	0
Germany	32	(0,7)	555	(2,6)	-4	(1,0)	13	(0,7)	547	(3,7)	0	(1,0)
Austria	31	(0,8)	540	(2,7)	0	0	12	(0,7)	543	(4,3)	0	0
Spain	30	(0,9)	518	(2,7)	0	0	10	(0,6)	514	(5,4)	0	0
New Zealand	31	(0,6)	541	(2,7)	-4	(1,3)	12	(0,7)	531	(5,2)	3	(0,9)
United States	33	(1,0)	553	(4,0)	2	(1,4)	10	(0,6)	546	(5,3)	3	(0,9)
Scotland	34	(1,0)	538	(3,0)	-1	(1,6)	11	(1,0)	522	(6,7)	3	(1,2)
Morocco	28	(1,4)	331	(9,1)	-5	(2,4)	14	(1,8)	310	(12,6)	-3	(3,4)
Belgium (French)	31	(0,7)	506	(3,1)	0	0	16	(0,8)	510	(3,6)	0	0
France	34	(0,9)	527	(3,0)	-5	(1,4)	14	(0,6)	530	(3,8)	3	(0,8)
Hong Kong SAR	32	(0,8)	567	(2,5)	-8	(1,1)	13	(0,6)	550	(3,5)	4	(0,7)
Canada, Nova Scotia	33	(0,8)	552	(2,7)	0	0	13	(0,6)	533	(4,0)	0	0
Iran, Islamic Rep. of	35	(1,2)	421	(4,0)	-3	(1,8)	14	(1,2)	374	(9,4)	4	(1,5)
Norway	34	(0,9)	503	(3,7)	-4	(1,5)	17	(0,8)	497	(3,9)	3	(1,3)
Italy	36	(1,0)	554	(3,7)	-2	(1,4)	14	(0,8)	552	(4,8)	2	(1,0)
Canada, Ontario	35	(1,2)	558	(3,3)	-1	(1,6)	14	(1,0)	564	(4,5)	4	(1,1)
Canada, Alberta	34	(0,8)	566	(2,8)	0	0	13	(0,6)	565	(4,2)	0	0
England	35	(1,1)	556	(3,2)	-2	(1,6)	11	(0,7)	537	(5,8)	3	(0,9)
Canada, Quebec	35	(1,1)	536	(3,6)	0	(1,4)	18	(1,0)	539	(4,2)	8	(1,2)
Sweden	36	(0,8)	553	(2,7)	-6	(1,1)	23	(1,1)	548	(3,0)	1	(1,4)
Canada, British Columbia	38	(0,8)	564	(3,1)	0	0	14	(0,7)	561	(4,2)	0	0
Chinese Taipei	38	(0,8)	536	(2,8)	0	0	16	(0,7)	529	(3,5)	0	0
Iceland	36	(0,7)	515	(2,1)	-4	(1,1)	22	(0,7)	514	(2,2)	4	(0,9)
Denmark	40	(0,9)	549	(2,6)	0	0	25	(1,1)	557	(3,7)	0	0
Luxembourg	41	(0,6)	560	(1,6)	0	0	20	(0,4)	559	(2,3)	0	0
Belgium (Flemish)	42	(0,8)	549	(2,3)	0	0	25	(0,8)	550	(2,1)	0	0
Netherlands	38	(0,9)	552	(2,1)	-5	(1,3)	34	(1,2)	549	(2,2)	4	(1,5)
International Avg.	29	(0,1)	506	(0,7)			12	(0,1)	496	(1,3)		

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A tilde (~) indicates insufficient data to report achievement.

A diamond (0) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

● Percent in 2006 significantly higher.

▼ Percent in 2006 significantly lower.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

## Early Home Literacy Activities During Childhood

### Hungarian Parents Spend a Lot of Time with Their Children

The researchers of PIRLS use a combined indicator to assess the frequency of the early home literacy activities; this indicator reflects the answers of the Parent Questionnaire. In the PIRLS Parent Questionnaire parents were asked to mark on a 3-point scale how frequently – often, sometimes, never or almost never- they or other members of the family read books, told stories, sang songs, read aloud

Exhibit 18: Index of Early Home Literacy Activities (EHLA) with Trends

Countries		High SATR			Medium SATR			Low SATR		
		2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001	2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001	2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001
Scotland	s	85 (1,1)	547 (3,5)	3 (1,6)	14 (1,1)	522 (8,2)	-2 (1,4)	2 (0,4)	~	0 (0,5)
Canada, Nova Scotia		77 (0,8)	553 (2,3)	0	20 (0,8)	523 (3,4)	0	3 (0,3)	510 (7,8)	0
Russian Federation		75 (1,0)	573 (3,2)	9 (1,6)	20 (0,8)	548 (4,3)	-6 (1,3)	4 (0,4)	520 (6,7)	-3 (0,8)
New Zealand	s	74 (1,0)	560 (2,0)	5 (1,5)	22 (0,9)	519 (3,8)	-4 (1,4)	4 (0,4)	501 (8,0)	-1 (0,7)
Israel		73 (1,2)	526 (4,3)	x	22 (1,0)	531 (5,8)	x	5 (0,4)	531 (7,8)	x
Canada, Ontario	r	71 (1,3)	563 (3,0)	1 (1,6)	23 (1,0)	541 (4,2)	-2 (1,3)	6 (0,6)	539 (8,4)	1 (0,8)
Canada, British Columbia	r	71 (1,2)	570 (2,9)	0	23 (1,0)	547 (4,3)	0	6 (0,5)	539 (6,7)	0
Canada, Alberta	r	70 (1,2)	573 (2,5)	0	25 (1,1)	554 (3,9)	0	5 (0,6)	516 (6,4)	0
Hungary		69 (0,9)	560 (3,1)	7 (1,4)	26 (0,8)	541 (3,7)	-6 (1,3)	5 (0,5)	525 (7,8)	-1 (0,7)
Spain	s	68 (1,1)	530 (2,5)	0	26 (1,0)	506 (4,0)	0	6 (0,6)	487 (6,4)	0
Macedonia, Rep. of	r	67 (1,0)	460 (4,3)	6 (1,7)	27 (0,8)	431 (5,0)	-4 (1,3)	6 (0,5)	414 (9,3)	-2 (1,1)
Trinidad and Tobago		67 (1,2)	457 (5,1)	0	27 (0,9)	416 (5,3)	0	6 (0,6)	363 (10,4)	0
Georgia		66 (1,5)	481 (3,6)	0	26 (1,2)	461 (4,3)	0	8 (1,0)	458 (11,5)	0
Italy		65 (1,0)	561 (2,7)	3 (1,4)	28 (0,9)	545 (3,9)	-2 (1,3)	7 (0,6)	531 (6,1)	-1 (0,7)
Slovak Republic		65 (1,1)	542 (2,2)	2 (1,5)	30 (0,8)	524 (3,3)	-2 (1,3)	5 (0,6)	475 (15,6)	0 (0,8)
Netherlands	s	64 (1,2)	561 (1,8)	9 (1,6)	30 (1,0)	547 (2,8)	-7 (1,4)	6 (0,6)	544 (5,1)	-2 (0,9)
Canada, Quebec	r	64 (1,1)	544 (3,0)	3 (1,7)	30 (1,0)	523 (3,6)	-2 (1,6)	6 (0,6)	517 (6,1)	-1 (0,9)
Slovenia		64 (0,9)	532 (2,3)	6 (1,4)	31 (0,8)	510 (3,2)	-6 (1,3)	5 (0,3)	503 (5,2)	-1 (0,6)
Poland		62 (1,1)	532 (2,5)	0	32 (1,0)	506 (3,4)	0	6 (0,5)	491 (6,7)	0
Latvia		60 (1,1)	550 (2,4)	2 (1,8)	33 (1,0)	532 (3,4)	-1 (1,7)	7 (0,5)	526 (5,4)	-1 (0,7)
France		59 (1,0)	533 (2,4)	3 (1,5)	33 (0,9)	516 (2,6)	-2 (1,4)	8 (0,6)	500 (4,5)	-1 (0,9)
Bulgaria		57 (1,9)	562 (4,2)	-5 (2,6)	26 (1,1)	540 (5,4)	1 (1,5)	17 (1,8)	524 (9,7)	4 (2,4)
Germany		57 (0,8)	558 (2,5)	13 (1,1)	34 (0,9)	551 (2,5)	-9 (1,2)	9 (0,5)	531 (4,8)	-5 (0,8)
Iceland	r	56 (0,9)	527 (1,9)	3 (1,2)	35 (0,9)	506 (2,4)	-4 (1,2)	9 (0,5)	492 (5,4)	1 (0,8)
Lithuania		55 (1,1)	545 (1,9)	7 (1,7)	36 (1,0)	531 (1,9)	-3 (1,5)	9 (0,5)	523 (3,8)	-3 (1,0)
Belgium (French)		52 (0,9)	513 (2,9)	0	36 (0,7)	493 (3,3)	0	11 (0,7)	475 (5,5)	0
Denmark		52 (1,1)	558 (2,5)	0	36 (1,0)	541 (3,1)	0	11 (0,6)	529 (4,6)	0
Austria		52 (1,0)	552 (2,3)	0	37 (0,9)	532 (2,4)	0	11 (0,6)	510 (3,7)	0
Romania		51 (1,9)	518 (3,8)	-3 (2,4)	30 (1,3)	483 (5,2)	0 (1,7)	19 (1,8)	427 (10,0)	4 (2,1)
Norway		49 (1,2)	509 (3,1)	2 (1,7)	41 (1,2)	495 (3,5)	0 (1,7)	11 (0,7)	485 (6,4)	-2 (1,2)
South Africa	r	49 (0,9)	325 (8,0)	0	40 (0,7)	285 (4,7)	0	11 (0,4)	277 (5,3)	0
Kuwait	r	48 (1,1)	355 (4,5)	0	39 (0,9)	327 (5,3)	0	13 (0,7)	311 (9,6)	0
Luxembourg		47 (0,7)	574 (1,4)	0	36 (0,7)	553 (2,0)	0	17 (0,4)	535 (2,0)	0
Sweden		46 (1,1)	561 (2,6)	5 (1,3)	40 (1,0)	547 (2,7)	-5 (1,2)	14 (0,7)	532 (3,6)	0 (0,8)
Moldova, Rep. of		46 (1,3)	513 (3,7)	5 (1,8)	36 (1,2)	494 (3,2)	-3 (1,6)	17 (1,1)	480 (6,0)	-2 (1,6)
Indonesia		44 (1,6)	418 (4,2)	0	37 (1,4)	404 (4,8)	0	19 (1,8)	383 (5,4)	0
Belgium (Flemish)		41 (0,9)	560 (2,4)	0	41 (0,8)	544 (2,1)	0	18 (0,7)	530 (2,6)	0
Singapore		38 (0,8)	581 (2,8)	1 (1,3)	42 (0,6)	553 (2,9)	0 (0,9)	20 (0,6)	534 (4,2)	-1 (1,0)
Qatar	s	36 (0,8)	372 (2,4)	0	45 (0,8)	357 (2,2)	0	18 (0,6)	340 (3,2)	0
Chinese Taipei		31 (0,8)	557 (2,4)	0	46 (0,6)	535 (2,1)	0	23 (0,8)	515 (3,3)	0
Hong Kong SAR	r	26 (0,9)	578 (2,6)	10 (1,2)	45 (0,8)	563 (2,4)	-9 (1,2)	29 (1,1)	558 (3,2)	-1 (1,6)
Iran, Islamic Rep. of		25 (1,1)	454 (4,0)	7 (1,6)	38 (1,2)	432 (3,7)	2 (1,6)	37 (1,7)	390 (4,5)	-9 (2,4)
Morocco		13 (0,8)	357 (9,2)	-	31 (1,4)	340 (6,4)	-	56 (1,7)	306 (8,1)	-
England	x	x	x	x	x	x	x	x	x	x
United States		-	-	-	-	-	-	-	-	-
International Avg.		54 (0,2)	515 (0,6)		33 (0,2)	494 (0,6)		13 (0,1)	475 (1,1)	

Based on parents' responses to the frequency of the following activities they engage in with their child prior to entry into primary school: read books, tell stories, sing songs, play with alphabet toys (e.g., blocks with letters of the alphabet), play word games, and read aloud signs and labels. Average is computed across the 6 items based on a 3-point scale: Never or almost never = 1, Sometimes = 2, and Often = 3. High level indicates an average score of greater than 2.33 through 3. Medium level indicates an average score of 1.67 through 2.33. Low level indicates an average score of 1 to less than 1.67.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (-) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

◉ Percent in 2006 significantly higher.

◊ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

signs or labels to the children, or played with alphabet toys (blocks with letters of the alphabet), or word-games together before the child began primary school. The answers given to the questions were summed up in an indicator that measures the *frequency of home literacy activities in early childhood*.

Exhibit 18 presents the percentage of students in 2006 at each level – high, medium or low- of the index for each country, together with average reading achievement for those students. In addition, for those countries that participated in PIRLS 2001, the exhibit presents the difference in the percent of students from 2001 at each level.

In most countries, parents of the PIRLS 2006 students reported a fairly high level of engagement with their children in preschool literacy activities before entering compulsory schooling with this engagement the parents contribute to form the child's literacy abilities. More than half of the 4<sup>th</sup>-grade students are in the high category of the index. In Hungary, the percentage of those students who engaged in activities that develop reading literacy is even higher (69%) than the international average (also it increased significantly with 7% since the 2001 assessment). In an international comparison this is one of the highest percentages – after Scotland, Russia, New-Zealand and Israel and the four Canadian provinces. On an international level, the 33% of the students can be found in the medium category and 13% of them in the low category. In these two categories the percentages of the Hungarian students are significantly smaller, 26% of the Hungarian students fall into the medium and 5% into the low category. In addition, the percentages of the students in these two categories decreased compared to the 2001 data, with 6% in the medium category and with 1% in the low category (the latter difference is not significant).

Students engaging early literacy activities the most, according to the parents' recollections, performed better on average on the PIRLS 2006 reading achievement scale than students engaging less. The Hungarian students in the high level of the index achieved on average 560 points, which is 19 and 35 points better than the average reading achievement of those students with medium (541 points) or low (525 points) index values, respectively. This difference corresponds to the international average (21 and 40 points); it is even smaller than that.

After investigating the students' reading habits, we can conclude that Hungarian students' attitude towards learning and reading self-concept matches the international average; it does not substantially differ from it. At the same time, the Hungarian students read more literary and informational texts outside of school than students of other countries. Hungarian parents spend more time with their children before they began school than the average, and there is a positive relationship between engaging in early childhood literacy activities and the reading achievement of the 4<sup>th</sup>-grade students.

## Family background

Numerous previous studies have provided insight into the importance of home environments for children's reading literacy. Family environment has great influence in establishing the foundation for reading literacy, motivating the students and raising awareness about the importance of literacy abilities. The PIRLS 2006 placed an extraordinarily great emphasis on collecting information about the family attributes of the students, since in case of the 4<sup>th</sup>-grade students the home environment has a more influential effect on literacy than in higher grades.

The assessment take numerous family variables into consideration studying the factors that influence the students literacy abilities like, for example, the level of parental education parents' occupational level, educational aids and the number of the children's book in the home.

## Home Educational Resources

### *The Most Important Factor in the Hungarian Students' Achievement*

To examine the students' home environment, PIRLS collected information on material and cultural resources which the students can use when learning at home and which can influence their reading achievement. The Student and Parent Questionnaires collected data regarding the number of books at home, whether there are computers or daily newspapers in the students' home, how many books of their own the students have, whether they have a desk of their own and what are the parents' highest educational qualifications. Combining these variables we get an indicator which represents the students' access to the home educational resources.

Exhibit 19: Index of Home Educational Resources (HER) with Trends

Countries	High SATR						Medium SATR						Low SATR					
	2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001				2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001				2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			
Norway	26 (1,2)	531 (2,5)	-7	(1,8)	☉		74 (1,2)	493 (2,9)	7	(1,8)	☉		0 (0,1)	~	~	0 (0,1)		
Denmark	24 (1,3)	576 (3,4)	0	0			75 (1,3)	540 (2,3)	0	0			1 (0,2)	~	~	0 0		
Iceland	r 24 (0,8)	550 (2,9)	4	(1,1)	☉		76 (0,8)	507 (1,6)	-4	(1,1)	☉		0 (0,1)	~	~	0 (0,1)		
Sweden	22 (1,4)	578 (3,5)	-3	(1,9)			78 (1,4)	546 (2,1)	3	(1,9)			0 (0,1)	~	~	0 (0,1)		
Scotland	s 21 (1,6)	589 (6,7)	4	(2,1)	☉		77 (1,6)	531 (3,1)	-4	(2,1)	☉		1 (0,4)	~	~	0 (0,5)		
Canada, British Columbia	r 20 (1,2)	597 (3,6)	0	0			79 (1,3)	556 (2,9)	0	0			0 (0,2)	~	~	0 0		
Netherlands	s 20 (1,1)	584 (2,9)	13	(1,3)	☉		79 (1,1)	550 (1,4)	-12	(1,3)	☉		1 (0,3)	~	~	0 (0,4)		
Canada, Alberta	r 19 (1,2)	598 (3,9)	0	0			80 (1,2)	559 (2,6)	0	0			0 (0,1)	~	~	0 0		
Canada, Nova Scotia	19 (1,1)	590 (3,5)	0	0			81 (1,1)	539 (1,8)	0	0			0 (0,1)	~	~	0 0		
Canada, Ontario	r 18 (1,5)	591 (4,2)	0	(2,1)			81 (1,4)	550 (2,6)	0	(2,0)			1 (0,2)	~	~	0 (0,3)		
New Zealand	s 18 (1,0)	591 (3,6)	-1	(1,5)			81 (1,0)	541 (2,0)	2	(1,6)			1 (0,1)	~	~	-1 (0,3)		
Israel	16 (1,3)	587 (4,9)	x	x			82 (1,4)	526 (3,8)	x	x			2 (0,4)	~	~	x x		
Hungary	15 (1,1)	607 (2,9)	-5	(1,7)	☉		80 (1,3)	548 (2,8)	4	(1,7)	☉		5 (0,9)	467 (8,8)	2	(1,0)		
France	15 (1,1)	570 (3,1)	1	(1,5)			82 (1,1)	520 (1,9)	1	(1,5)			4 (0,4)	463 (5,7)	-3	(0,6)	☉	
Luxembourg	14 (0,5)	601 (2,6)	0	0			82 (0,5)	555 (1,1)	0	0			3 (0,3)	499 (5,2)	0	0		
Canada, Quebec	r 14 (0,9)	571 (4,8)	0	(1,5)			84 (0,9)	534 (2,6)	-1	(1,5)			2 (0,3)	~	~	0 (0,4)		
Belgium (Flemish)	14 (1,0)	580 (2,5)	0	0			84 (1,0)	545 (1,8)	0	0			2 (0,3)	~	~	0 0		
Spain	s 13 (1,3)	560 (4,4)	0	0			82 (1,2)	520 (2,4)	0	0			5 (0,7)	458 (9,0)	0	0		
Germany	r 12 (0,9)	592 (2,9)	-4	(1,2)	☉		85 (0,9)	553 (2,1)	3	(1,2)	☉		3 (0,3)	483 (6,0)	0	(0,5)		
Russian Federation	12 (1,0)	610 (4,8)	4	(1,2)	☉		86 (1,0)	560 (3,4)	-4	(1,2)	☉		2 (0,3)	~	~	0 (0,4)		
Singapore	11 (0,5)	613 (4,0)	0	(1,0)			86 (0,5)	556 (2,8)	0	(1,0)			2 (0,3)	~	~	0 (0,4)		
Bulgaria	11 (1,1)	608 (5,8)	0	(1,4)			74 (1,8)	549 (4,0)	-2	(2,4)			15 (1,9)	514 (11,1)	2	(2,5)		
Lithuania	11 (0,7)	577 (2,9)	0	(1,3)			88 (0,8)	533 (1,6)	-1	(1,3)			1 (0,2)	~	~	0 (0,4)		
Slovak Republic	10 (0,7)	585 (3,1)	1	(1,3)			86 (1,0)	533 (2,2)	-1	(1,6)			4 (0,8)	407 (14,5)	0	(1,2)		
Chinese Taipei	10 (0,8)	585 (3,9)	0	0			86 (0,8)	534 (1,9)	0	0			3 (0,3)	473 (6,5)	0	0		
Latvia	9 (0,8)	571 (3,9)	-5	(1,2)	☉		90 (0,8)	540 (2,4)	6	(1,2)	☉		1 (0,2)	~	~	-1 (0,4)		
Hong Kong SAR	9 (0,9)	589 (2,9)	5	(1,0)	☉		85 (0,7)	565 (2,2)	3	(1,1)	☉		6 (0,5)	531 (7,2)	-8	(1,1)	☉	
Georgia	9 (0,8)	510 (4,9)	0	0			87 (1,1)	470 (3,1)	0	0			4 (0,9)	453 (23,7)	0	0		
Slovenia	9 (0,5)	578 (3,4)	-2	(0,9)	☉		90 (0,6)	519 (2,0)	3	(0,9)	☉		2 (0,2)	~	~	-1 (0,4)		
Poland	9 (0,7)	583 (4,5)	0	0			82 (0,8)	522 (2,2)	0	0			9 (0,7)	458 (5,9)	0	0		
Italy	8 (0,7)	598 (4,4)	1	(0,9)			84 (1,0)	553 (2,9)	-2	(1,3)	☉		8 (0,9)	517 (7,7)	2	(1,0)		
Qatar	s 7 (0,3)	402 (5,4)	0	0			85 (0,4)	363 (1,7)	0	0			8 (0,3)	321 (6,3)	0	0		
Austria	7 (0,7)	592 (4,2)	0	0			92 (0,7)	538 (1,8)	0	0			1 (0,2)	~	~	0 0		
Trinidad and Tobago	r 5 (0,5)	510 (8,3)	0	0			89 (0,9)	443 (4,8)	0	0			7 (0,8)	375 (9,2)	0	0		
Belgium (French)	r 5 (0,5)	553 (5,8)	0	0			91 (0,6)	502 (2,5)	0	0			4 (0,5)	440 (5,9)	0	0		
Macedonia, Rep. of	s 5 (0,5)	523 (9,0)	3	(0,6)	☉		85 (1,1)	457 (3,7)	3	(1,7)			11 (1,1)	373 (6,3)	-6	(1,7)	☉	
Kuwait	s 4 (0,4)	401 (12,4)	0	0			90 (0,6)	348 (4,4)	0	0			6 (0,5)	308 (13,3)	0	0		
Romania	4 (0,6)	578 (5,7)	-1	(1,1)			77 (1,6)	504 (4,1)	-2	(2,0)			19 (1,7)	429 (10,0)	3	(2,1)		
Moldova, Rep. of	4 (0,6)	554 (9,8)	0	(0,9)			74 (1,1)	506 (2,9)	-16	(1,6)	☉		22 (1,1)	477 (5,2)	16	(1,4)	☉	
South Africa	r 3 (0,5)	528 (15,0)	0	0			70 (1,0)	324 (6,2)	0	0			26 (1,1)	264 (4,6)	0	0		
Iran, Islamic Rep. of	3 (0,4)	537 (7,7)	1	(0,4)			47 (1,7)	457 (2,8)	-5	(2,7)			51 (1,9)	387 (3,9)	4	(2,9)		
Morocco	1 (0,3)	~	~	~			38 (1,8)	348 (5,7)	~	~			61 (1,9)	313 (8,8)	~	~		
Indonesia	0 (0,2)	~	~	~			62 (1,7)	418 (4,1)	0	0			37 (1,7)	386 (4,4)	0	0		
England	x	x	x	x	x		x	x	x	x	x		x	x	x	x	x	
United States	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
International Avg.	11 (0,1)	563 (1,0)					80 (0,2)	503 (0,5)					9 (0,1)	426 (1,9)				

Based on students' responses to two questions about home educational resources: number of books in the home, and educational aids in the home (computer, study desk/table for own use, books of their own, access to a daily newspaper); and parents' responses to two questions: number of children's books in the home, and parents' education. High level indicates more than 100 books in the home; more than 25 children's books; at least 3 of 4 educational aids; and at least one parent finished university. Low level indicates 25 or fewer books in the home; 25 or fewer children's books; no more than 2 educational aids; and parents that have not completed secondary education. Medium level includes all other combinations of responses.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (-) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

☉ Percent in 2006 significantly higher.

☹ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

The Index of Home Educational Resources similarly to the previous aggregated indicators, the percentage of students, the average achievement and the difference compared to 2001 percentage ratio are shown for three levels of the index: high, medium and low (See Exhibit 19).

Exhibit 19 presents that Hungarian students can study in a better home environment than the international average. Of the 4<sup>th</sup>-grade students in Hungary, 15% have high, 80% have medium and 5% have low index values. The students in the high category in Hungary achieved 607 points. There is no country where the students with high level of the index have significantly higher performance on average. Compared to the performance of our students in the medium category (548 points), on the contrary, the performance of students with a similar background in Russia, Hong-Kong and Alberta are significantly higher. Moreover, there are countries (Hong-Kong and Italy, for example) where students with low level of the index have on average higher performance than our average of 467 points.

There is a 140-point difference between the average achievement of Hungarian students assigned to the high and students assigned to the low level; this is one of the largest difference among the participating countries, similar difference can only be found in the case of Trinidad and Tobago, Romania, Iran, Macedonia, Slovakia and the South-African Republic. We get similar results if we examine the difference between the students assigned to the high level and students assigned to the middle level of the index. There is a 59-point difference between students' average reading achievement in the two categories, which is one of the largest ones among the participating countries. Based on these findings, we can conclude that in Hungary there is a clear-cut relationship between students' average reading achievement and their home environment and all the factors constituting the index.

The Index of Home Educational Resources provides a unified approach toward examining the students' home environment, including many family attributes which are used by most of the similar studies. Since it is one of the most important background factors influencing the students' average reading achievement, PIRLS examined the relationship between the separate variables constituting the index and the average reading achievement. This analysis reaches beyond the purposes of the present volume, so the PIRLS 2006 National Report will provide more details on this matter.

## **Parents' Reading Habits and Attitudes**

### **Hungarian Parents Read Less in 2006 than in 2001**

PIRLS 2001 assessment reached the conclusion that those students' who had high reading achievement at the fourth grade often had parents who read a lot themselves and had favorable attitudes to reading.. In 2006, we asked the parents again how much time they spend reading for themselves at home including books, magazines, newspapers, and materials needed for work. Exhibit 20 summarizes the parents' answers along with the relevant average student reading achievement results and changes compared to 2001.

On an international level, 37% of the reported parents read five hours per week at least, 43% read one-five hours weekly, 20% read less than an hour weekly. In Hungary, 39% of the 4<sup>th</sup>-grade students have parents reading at least five hours per week, which is a significant 7%-drop compared to the results in 2001. The drop in the percent of the students whose parents read a lot is not solely attributable to Hungary, the percentage of those parents who read more than five hours per week dropped in 13 countries out of the 24 where we have relevant data, and there was no country where this percentage increased compared to 2001. Almost half (46%) of the Hungarian students have parents who read one-five hours per week, and the parents of another 16% read less than an hour weekly. The later percentage increased significantly, with 5%, since 2001.



The effect of the parents' reading habits can be seen in the fact that those students whose parents read at least five hours daily achieved on average 67 points more on the average reading achievement scale than those whose parents read less than an hour weekly.

As the above data demonstrate, home environment and family background play an important role in developing students' reading achievement. Students with better home environment and with parents who are on higher educational and occupational level have better reading skills at 4<sup>th</sup> grade in the school. This is so in every country, but Hungary is one of the countries where the gaps between the students' performance of the different segments of society are the biggest. Even though we achieved very good results overall, we need to look at how our educational policies could provide the conditions for creating equal opportunities.

Exhibit 20: Parents Reading\* at Home with Trends

Countries	More than 5 Hours a Week						1-5 Hours a Week						Less than 1 Hour a Week					
	2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001				2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001				2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			
Norway	61 (1,0)	507 (2,5)	2	(1,5)			35 (1,0)	490 (3,5)	0	(1,4)			4 (0,6)	489 (11,4)	-1	(0,8)		
Scotland	s 54 (1,7)	548 (4,1)	-7	(2,1)		☹	39 (1,4)	542 (4,0)	5	(1,8)		☹	7 (0,8)	505 (6,5)	1	(1,0)		
Iceland	r 53 (0,9)	526 (2,1)	-1	(1,2)			41 (0,9)	509 (1,8)	0	(1,2)			6 (0,5)	489 (5,0)	1	(0,6)		
Germany	51 (1,1)	566 (1,9)	0	(1,5)			40 (1,0)	545 (2,6)	-1	(1,2)			9 (0,6)	515 (6,0)	0	(0,9)		
Sweden	51 (1,3)	560 (2,7)	-8	(1,7)		☹	41 (1,2)	546 (2,7)	5	(1,4)		☹	8 (0,5)	531 (6,0)	2	(0,8)		☹
New Zealand	s 49 (1,1)	557 (2,5)	-3	(1,6)			40 (1,0)	546 (2,8)	2	(1,4)			11 (0,5)	513 (5,5)	0	(0,8)		
Canada, British Columbia	r 49 (1,2)	570 (3,3)	0	0			41 (0,9)	562 (3,4)	0	0			10 (0,7)	533 (4,5)	0	0		
Canada, Alberta	r 47 (1,1)	571 (3,0)	0	0			44 (1,0)	564 (2,9)	0	0			9 (0,7)	542 (5,7)	0	0		
Canada, Nova Scotia	45 (0,8)	555 (2,5)	0	0			45 (0,8)	541 (2,6)	0	0			10 (0,5)	526 (4,9)	0	0		
Canada, Ontario	r 43 (1,1)	567 (3,6)	-10	(1,8)		☹	45 (1,0)	551 (3,2)	7	(1,5)		☹	12 (0,8)	539 (5,7)	3	(1,1)		☹
Macedonia, Rep. of	r 43 (1,1)	461 (4,7)	-2	(1,8)			42 (1,0)	449 (3,9)	3	(1,5)		☹	15 (0,9)	404 (6,1)	-1	(1,7)		
Netherlands	s 43 (1,3)	565 (2,2)	-6	(1,7)		☹	45 (1,1)	552 (2,1)	4	(1,6)		☹	13 (0,8)	537 (4,0)	3	(1,1)		☹
Trinidad and Tobago	42 (1,0)	455 (5,1)	0	0			40 (1,0)	434 (5,9)	0	0			17 (0,9)	414 (7,6)	0	0		
Hong Kong SAR	42 (0,9)	569 (2,3)	2	(1,4)			43 (0,8)	567 (2,6)	1	(1,1)			15 (0,8)	548 (4,4)	-3	(1,1)		☹
Georgia	42 (1,1)	486 (3,4)	0	0			38 (1,0)	471 (3,4)	0	0			21 (1,3)	445 (5,5)	0	0		
Singapore	41 (0,7)	576 (3,1)	-6	(1,2)		☹	41 (0,7)	557 (3,0)	4	(1,0)		☹	18 (0,6)	527 (3,8)	2	(1,0)		
Austria	40 (1,0)	555 (2,7)	0	0			48 (0,9)	534 (2,7)	0	0			11 (0,5)	509 (3,5)	0	0		
Denmark	40 (1,1)	556 (2,5)	0	0			51 (1,0)	549 (2,5)	0	0			9 (0,6)	508 (6,1)	0	0		
Luxembourg	40 (0,7)	581 (1,5)	0	0			42 (0,7)	553 (1,7)	0	0			18 (0,6)	527 (2,6)	0	0		
Spain	s 40 (1,2)	536 (3,3)	0	0			46 (1,3)	516 (2,7)	0	0			14 (0,9)	494 (5,3)	0	0		
Hungary	39 (1,3)	576 (2,7)	-7	(1,6)		☹	46 (1,0)	548 (3,3)	2	(1,4)			16 (1,2)	509 (5,0)	5	(1,4)		☹
Canada, Quebec	r 38 (1,4)	543 (3,7)	1	(1,9)			49 (1,2)	536 (3,1)	0	(1,7)			13 (0,8)	514 (5,3)	-1	(1,2)		
Lithuania	38 (1,0)	548 (2,1)	0	(1,6)			46 (0,8)	536 (1,7)	-2	(1,4)			16 (0,8)	518 (3,0)	2	(1,2)		
Latvia	37 (1,1)	550 (3,0)	-8	(1,4)		☹	47 (0,9)	542 (2,6)	4	(1,3)		☹	16 (0,9)	525 (3,8)	4	(1,2)		☹
South Africa	r 36 (0,7)	314 (7,8)	0	0			35 (0,6)	313 (6,7)	0	0			29 (0,7)	290 (4,9)	0	0		
Israel	35 (1,2)	549 (5,0)	x	x			47 (1,2)	523 (3,9)	x	x			18 (0,8)	493 (7,2)	x	x		
Slovak Republic	35 (1,0)	551 (2,4)	-8	(1,5)		☹	48 (1,1)	534 (2,9)	2	(1,4)			17 (0,9)	489 (7,0)	7	(1,1)		☹
Belgium (French)	35 (1,2)	519 (3,1)	0	0			47 (0,9)	497 (3,0)	0	0			18 (1,0)	480 (4,2)	0	0		
Chinese Taipei	34 (0,9)	552 (2,7)	0	0			41 (0,8)	538 (2,3)	0	0			25 (0,7)	513 (2,7)	0	0		
Belgium (Flemish)	34 (0,8)	559 (2,4)	0	0			46 (0,8)	549 (1,9)	0	0			20 (0,8)	529 (2,4)	0	0		
Slovenia	33 (1,1)	540 (2,5)	-4	(1,6)		☹	52 (0,9)	520 (2,2)	-1	(1,4)			15 (0,7)	498 (3,7)	5	(0,9)		☹
Russian Federation	32 (0,9)	574 (4,1)	-3	(1,4)		☹	45 (0,8)	566 (3,5)	4	(1,3)		☹	24 (0,8)	553 (4,0)	-1	(1,6)		
Italy	31 (1,0)	569 (3,3)	-1	(1,3)			45 (1,2)	554 (3,2)	-4	(1,4)		☹	24 (0,9)	532 (4,4)	5	(1,2)		☹
Poland	30 (0,9)	539 (3,2)	0	0			53 (0,8)	517 (2,5)	0	0			16 (0,8)	498 (5,0)	0	0		
Bulgaria	30 (1,5)	572 (4,4)	-17	(2,1)		☹	38 (1,0)	554 (4,1)	8	(1,4)		☹	32 (2,0)	523 (7,3)	10	(2,5)		☹
Moldova, Rep. of	30 (1,1)	512 (3,6)	-2	(1,7)			42 (1,3)	502 (3,2)	3	(1,7)			29 (1,6)	486 (5,0)	-1	(2,1)		
France	28 (1,0)	545 (2,6)	-3	(1,5)		☹	53 (0,8)	523 (2,4)	3	(1,3)			19 (0,7)	498 (3,1)	1	(1,1)		
Kuwait	r 26 (0,9)	348 (6,1)	0	0			43 (1,0)	343 (4,9)	0	0			32 (0,9)	324 (5,6)	0	0		
Romania	24 (1,4)	521 (5,5)	-3	(2,0)			42 (1,3)	500 (4,6)	0	(1,7)			34 (1,9)	457 (7,9)	2	(2,4)		
Qatar	r 21 (0,6)	376 (3,2)	0	0			43 (0,7)	364 (2,3)	0	0			36 (0,7)	338 (2,6)	0	0		
Morocco	21 (1,2)	338 (7,1)	-	-			33 (1,4)	343 (6,5)	-	-			46 (2,0)	306 (9,2)	-	-		
Indonesia	20 (1,2)	415 (6,1)	0	0			33 (1,4)	410 (4,9)	0	0			47 (1,6)	399 (4,3)	0	0		
Iran, Islamic Rep. of	17 (0,9)	445 (4,6)	-6	(1,5)		☹	34 (1,0)	438 (3,1)	0	(1,6)			49 (1,5)	402 (3,9)	7	(2,2)		☹
England	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
United States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
International Avg.	37 (0,2)	516 (0,6)					43 (0,2)	502 (0,6)					20 (0,2)	477 (0,9)				

Background data provided by parents.

\* Includes books, magazines, newspapers, and materials for work.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (-) indicates comparable data are not available.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

☹ Percent in 2006 significantly higher.

☹ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.



It is also interesting to note that the number of the frequent adult readers has fallen on average internationally, not only in Hungary; this result highlights the importance of schools even more in helping children like reading and developing the habit of reading frequently.

## School Background

Along with the family background, it is naturally also an important factor in the students' literacy development how well-equipped the school is, since schools are the environment where students familiarize themselves with the foundations of reading, where they have to read daily. This is exactly the reason why PIRLS surveyed the students' school background, to get a picture of how much the resources and the environment at school influence the progress of the students in each of the countries.

## Class Size

### Reduction in Average Class Size and Better Performing Larger Classes in Hungary

Across the PIRLS 2006 participants, the average class size for fourth grade is 24 students, but the range in average class size varies a lot. While the average class size in Romania and Luxembourg is 17 and 19, in Singapore it is 38 and in the South-African Republic it is 42 students. In Hungary, 22 students go to one class on average, which means a 2-person significant decrease compared to 2001. The average class size is also 22 in Poland, Germany, Russia, Moldavia, Slovakia and Spain. There are more students going to one class in Macedonia from the surrounding post-socialist countries, in Sweden from the Northern region, and in France and Belgium from the Western European countries, the class size is also higher in Israel, and in the Anglo-Saxon, Islamic and Far-Eastern countries.

The reduction in average class size is a common phenomenon in the participating countries. It is only in Iceland and Singapore, from the countries participating in both cycles, where the average class size increased, it did so with one student, while in 15 countries the average class size decreased with 1-3 students. On average, one third (32%) of the students go to a class of 1-20 students, half (51%) of them to classes of 21-30, 17% go to classes of 31 or more students (Exhibit 21). On the other hand, 38% of the Hungarian students go to classes of 1-20, 58% to classes of 21-30 and only 4% studies in classes of 30 or more students. In Hungary, the percentage of the students with class size of 20 or smaller increased significantly: in 2006, 12% more of the students studied in such classes than in 2001, while the percentage of students going to classes of 21-30 and above 30 dropped with 6-6%, however, these decreases are not significant.

Increase in percentages of students in small classes is typical mostly in the post-socialist countries. In these countries – except Russia, Slovakia and Lithuania – the percentage of the students going to classes of 1-20 increased significantly (respectively 19% in Latvia, 22% in Bulgaria and 23% in Romania).

Smaller class size makes it possible for teachers to pay more attention to students individually, so, theoretically it means better student performance. On the other hand, it is common practice that weaker students get into smaller-size classes and their weaker performance lowers the average performance of students going to smaller classes. Students going to classes of medium size (21-30) had the highest reading achievement internationally on average and there is no significant difference between those who go to larger or smaller classes.

In Hungary, there is no significant difference between the average reading achievement of students going to classes of 21-30 and classes of 31 or more. On the other hand, students going to smaller classes achieved significantly weaker results. The average reading achievement of students going to classes of 21-30 is better with 34 points and of those going to even larger classes is better with 39 points than the results of those pupils going to classes of 20 or smaller. This difference is very large even on an international level; larger difference can only be found in the South African Republic and Trinidad and Tobago. Naturally, this does not mean that smaller classes would be less efficient, there can be innumerable factors behind the weaker results which affect both the students' achievements and the class size: it is possible that mostly the weaker students get into smaller classes in Hungary, or smaller-size classes are characteristically in smaller towns and villages, where the relatively weaker average reading achievement of the students is caused by low level of the educational resources at home.

Exhibit 21: Class Size for Reading and Language Instruction with Trends (Continued)

Countries	1-20 Students						21-30 Students						31 or More Students					
	2006 Percent of Students	Average Achieve- ment		Difference in Percent from 2001			2006 Percent of Students	Average Achieve- ment		Difference in Percent from 2001			2006 Percent of Students	Average Achieve- ment		Difference in Percent from 2001		
Luxembourg	92 (0,1)	557 (1,2)	0	0			6 (0,1)	554 (2,8)	0	0			1 (0,0)	~	~	0	0	
Romania	57 (3,3)	474 (6,7)	23 (4,3)	0			41 (3,4)	508 (7,0)	-13 (5,0)	0			2 (1,1)	~	~	-9 (3,0)	0	
Bulgaria	59 (4,0)	541 (5,5)	22 (5,1)	0			41 (4,0)	556 (6,7)	-21 (5,2)	0			0 (0,0)	~	~	-1 (1,2)	0	
Slovenia	57 (3,4)	519 (2,5)	14 (5,1)	0			42 (3,4)	525 (3,1)	-16 (5,1)	0			1 (0,9)	~	~	1 (0,9)	0	
Italy	53 (3,8)	548 (4,0)	3 (5,2)				47 (3,8)	555 (3,7)	-3 (5,2)				0 (0,0)	~	~	0 (0,4)		
Norway	56 (4,4)	496 (4,1)	6 (6,1)				42 (4,1)	500 (3,3)	-7 (6,0)				2 (1,5)	~	~	2 (1,7)		
Lithuania	40 (3,0)	526 (2,7)	6 (4,3)				60 (3,0)	545 (2,0)	-4 (4,4)				0 (0,0)	~	~	-1 (1,0)		
Denmark	51 (3,9)	541 (3,4)	0	0			49 (4,0)	553 (3,5)	0	0			0 (0,5)	~	~	0	0	
Latvia	51 (3,0)	531 (3,6)	19 (4,4)	0			45 (3,0)	550 (2,8)	-13 (4,9)	0			4 (1,5)	564 (11,8)	-7 (3,0)	0	0	
Iceland	48 (0,4)	509 (1,9)	-2 (0,5)	0			49 (0,4)	511 (1,8)	-1 (0,5)	0			3 (0,1)	504 (10,6)	3 (0,1)	0	0	
Belgium (Flemish)	47 (3,9)	546 (2,7)	0	0			52 (3,9)	548 (2,6)	0	0			0 (0,3)	~	~	0	0	
Austria	42 (3,5)	542 (3,2)	0	0			58 (3,5)	536 (2,8)	0	0			0 (0,0)	~	~	0	0	
Belgium (French)	39 (3,8)	496 (5,5)	0	0			59 (3,7)	502 (3,3)	0	0			2 (1,3)	~	~	0	0	
Georgia	51 (3,1)	467 (4,9)	0	0			29 (3,3)	464 (4,1)	0	0			20 (2,9)	489 (6,2)	0	0	0	
Poland	38 (3,6)	512 (3,9)	0	0			60 (3,7)	524 (3,2)	0	0			2 (0,8)	~	~	0	0	
Trinidad and Tobago	41 (3,1)	407 (9,8)	0	0			53 (3,4)	456 (6,0)	0	0			7 (2,0)	485 (14,4)	0	0	0	
Germany	33 (2,8)	541 (4,1)	2 (4,1)				67 (2,8)	553 (2,5)	1 (4,1)				0 (0,1)	~	~	-2 (0,9)	0	
Hungary	38 (3,6)	529 (5,6)	12 (4,8)	0			58 (3,8)	563 (3,5)	-6 (5,6)				4 (1,7)	568 (5,7)	-6 (3,3)	0	0	
Russian Federation	35 (2,3)	542 (4,9)	-2 (4,2)				62 (2,5)	577 (4,0)	7 (4,5)				2 (1,1)	~	~	-5 (2,2)	0	
Moldova, Rep. of	35 (3,5)	495 (5,9)	13 (5,3)	0			55 (3,8)	499 (4,2)	-5 (6,2)				10 (2,4)	513 (8,3)	-8 (4,1)	0	0	
Slovak Republic	34 (2,9)	520 (5,4)	3 (4,3)				59 (3,3)	534 (3,6)	2 (5,3)				7 (1,8)	553 (3,9)	-5 (3,4)			
Spain	32 (3,6)	498 (6,2)	0	0			68 (3,6)	519 (2,8)	0	0			0 (0,0)	~	~	0	0	
United States	26 (3,4)	535 (6,4)	3 (5,4)				68 (3,7)	541 (3,9)	1 (5,4)				5 (1,6)	540 (10,7)	-3 (2,9)			
Sweden	33 (3,5)	542 (3,8)	8 (4,5)				61 (4,1)	553 (2,9)	-5 (5,2)				6 (2,3)	545 (8,5)	-2 (3,3)			
Canada, Alberta	24 (2,5)	558 (4,2)	0	0			74 (2,7)	561 (3,0)	0	0			3 (1,2)	542 (22,9)	0	0	0	
Canada, Nova Scotia	19 (2,3)	536 (6,1)	0	0			79 (2,5)	544 (2,5)	0	0			2 (0,9)	~	~	0	0	
France	14 (1,9)	505 (4,8)	-3 (3,1)				85 (2,2)	524 (2,6)	3 (3,4)				1 (1,0)	~	~	0 (1,4)		
Netherlands	18 (3,3)	527 (4,1)	4 (4,2)				71 (3,8)	551 (2,0)	5 (5,5)				11 (2,6)	551 (5,1)	-10 (4,9)	0	0	
Macedonia, Rep. of	24 (3,3)	430 (10,6)	9 (4,3)	0			58 (4,0)	454 (7,4)	0 (5,7)				17 (3,0)	427 (14,8)	-9 (4,8)			
Kuwait	5 (1,8)	315 (23,7)	0	0			91 (2,5)	331 (4,4)	0	0			4 (1,8)	345 (15,5)	0	0	0	
Iran, Islamic Rep. of	28 (2,8)	401 (6,8)	5 (4,4)				44 (3,7)	422 (5,3)	5 (6,0)				28 (3,4)	439 (7,9)	-10 (5,0)	0	0	
Canada, Quebec	7 (1,7)	528 (9,1)	3 (2,4)				91 (2,1)	535 (3,1)	-3 (3,0)				2 (1,3)	~	~	0 (1,8)		
Canada, British Columbia	10 (2,4)	570 (6,9)	0	0			83 (3,2)	558 (3,3)	0	0			7 (2,3)	556 (11,8)	0	0	0	
Canada, Ontario	6 (1,9)	539 (6,1)	2 (2,3)				85 (3,4)	554 (3,2)	-3 (4,5)				9 (3,1)	563 (7,2)	1 (4,1)			
Scotland	11 (2,6)	525 (10,7)	0 (3,9)				71 (4,3)	528 (3,3)	0 (6,0)				18 (3,8)	524 (7,2)	0 (5,2)			
Qatar	12 (0,2)	352 (5,3)	0	0			68 (0,3)	354 (1,5)	0	0			20 (0,2)	344 (3,1)	0	0	0	
New Zealand	10 (1,2)	508 (8,4)	1 (2,6)				71 (2,5)	535 (2,6)	2 (4,7)				19 (2,4)	539 (4,4)	-3 (4,2)			
England	8 (1,6)	566 (17,1)	-1 (2,8)				71 (3,8)	536 (3,7)	23 (5,8)	0			21 (3,5)	548 (6,3)	-22 (5,8)	0	0	
Israel	6 (1,9)	497 (23,2)	2 (2,4)				49 (4,1)	527 (6,4)	7 (6,1)				45 (4,0)	499 (8,3)	-9 (5,9)			
Morocco	15 (2,8)	318 (15,8)	-1 (4,2)				35 (3,9)	338 (10,5)	4 (6,5)				50 (3,8)	318 (7,7)	-3 (6,7)			
Indonesia	19 (2,3)	391 (8,1)	0	0			32 (3,8)	408 (7,2)	0	0			49 (3,7)	408 (6,3)	0	0	0	
Chinese Taipei	3 (0,7)	504 (6,8)	0	0			22 (2,9)	530 (4,6)	0	0			75 (2,8)	539 (2,4)	0	0	0	
Hong Kong SAR	1 (0,6)	~	~	1 (0,6)			18 (3,3)	544 (6,1)	5 (5,2)				81 (3,3)	568 (2,6)	-6 (5,2)			
Singapore	3 (0,9)	583 (11,0)	2 (1,1)	0			1 (0,5)	~	-5 (1,6)	0			96 (1,1)	558 (3,0)	2 (2,0)			
South Africa	3 (0,8)	244 (31,8)	0	0			16 (2,4)	355 (21,7)	0	0			81 (2,4)	292 (6,3)	0	0	0	
International Avg.	32 (0,5)	489 (1,6)					51 (0,5)	504 (0,9)					17 (0,3)	486 (1,7)				

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A tilde (~) indicates insufficient data to report achievement.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

◊ Percent in 2006 significantly higher.

◊ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

Even with the relatively small class size on an international level, the student-teacher ratio is outstandingly low in Hungary. While there are 16-18 students per teacher in most of the European countries, in Hungary it is only 10 students per teacher. This difference can be explained by the fact that Hungarian students go to classes of the same size as other European students, however, there are more teachers teaching them.

## Availability of school resources

### *Principals Think Hungarian Schools are Well-equipped*

The PIRLS-study assessed the availability of the school resources based on the principals' responses. The School Questionnaire contained questions concerning human resources, material equipment and school facilities. The principals were asked to choose from the four categories indicating how much the shortage or inadequacy of human resources, equipment or facilities affects their school's capacity to instruct. So, the responses reflect the principals' opinions and do not only represent the shortage of the resources or the adequacy of their quality but they also demonstrate how important the principals think they are in the process of instruction. The answers given may be subjective or culture-dependent, therefore the index gained from summarizing the responses may be compared between different countries and different cultures only with restrictions. At the same time, important conclusions can be drawn from the distribution of the index and from the relationship between the index and the students' reading achievement within a country.

The distribution of the index and its relationship with the PIRLS average reading achievement scale is shown in exhibit 22. On average internationally, more than half of the students (52%) go to schools with high level of the index, in other words, the principal reckons that the institution is well-equipped and has adequate human resources and facilities, whereas 15% of the students go to a school where the inadequacy and or the shortage of resources and facilities is a substantial disadvantage of instruction.. Significant shortages were said to be found in the Islamic countries, Taiwan and, surprisingly in the internationally well-performing Russia and Hong-Kong; in these countries at least one third of the students go to a school with low index value.

In Hungary, 71% of the students go to well-equipped schools, so the percent of students in well-equipped schools are above the international average, on the middle of the rank of the countries. Still, 14% of the Hungarian students go to poorly equipped schools, and in this respect we are in the bottom third on the international scale. The percentage of those going to a poorly equipped school is higher only in Russia and Moldavia (among the post-socialist countries), and also in the South-African Republic and some countries in the Middle and Far East. Since 2001 the gap in Hungary between the availability of resources at schools has increased. Not significantly though, but the percentage of those students who go to schools with high level and those going to schools with low level of the index increased similarly, while the distribution of those going to schools with medium level of the index has dropped significantly. In the countries that participated in both assessment cycles, 11% more students go to schools with high level of the index than in 2001, spectacular increase can be witnessed mainly in Italy and Israel (20% and 26%), and also in Slovenia, Romania, Lithuania and Slovakia (18-34%) among the post-socialist countries. Four participants (Russia, Quebec province of Canada, Macedonia and Morocco) reported a significant decrease in number of students (9-56%) in whose schools the shortage of resources and facilities do not deter instruction.

Based on the data, on average, we can conclude that there is a positive relationship between absence of school resource shortages and average reading achievement.. There is a 29-point difference on average internationally between the results of the students going to the worst-equipped and students going to

the best-equipped schools. Still, there are countries with no significant difference between the students' results in relation to the availability of resources in their school – on the contrary, in Indonesia and Qatar better results were achieved in schools with medium availability.

In Hungary, there is no relationship between the students' average reading achievement and the availability of resources in their school, the largest difference, 13 points, can be found between the schools with medium and high levels of the index, but it is still not significant.

Exhibit 22: Index of Availability of School Resources (ASR) with Trends

Countries		High ASR					Medium ASR					Low ASR				
		2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001			2006 Percent of Students	Average Achieve- ment	Difference in Percent from 2001		
Netherlands	r	93 (2,5)	546 (1,8)	11	(4,6)	●	7 (2,5)	552 (9,8)	-10	(4,5)	▼	0 (0,0)	~	~	-1	(0,0)
Scotland	r	88 (3,3)	528 (3,8)	11	(5,3)	●	11 (3,1)	525 (8,4)	-12	(5,2)	▼	1 (0,0)	~	~	1	(0,0)
Denmark		86 (2,9)	546 (2,6)	0	0		14 (2,9)	551 (7,3)	0	0		0 (0,0)	~	~	0	0
Belgium (Flemish)		86 (2,9)	546 (2,2)	0	0		13 (2,9)	554 (4,9)	0	0		2 (1,1)	~	~	0	0
New Zealand		86 (2,5)	533 (2,2)	1	(4,1)		13 (2,3)	533 (7,8)	-3	(4,0)		2 (0,8)	~	~	2	(0,8)
Iceland	r	85 (0,3)	513 (1,4)	4	(0,4)	●	15 (0,3)	502 (3,3)	-3	(0,4)	▼	0 (0,0)	~	~	-2	(0,0)
Sweden		82 (3,7)	549 (2,8)	5	(5,2)		15 (3,5)	552 (3,8)	-3	(4,8)		3 (1,5)	540 (11,5)	-2	(2,6)	
Canada, British Columbia		82 (3,2)	556 (3,1)	0	0		17 (3,1)	563 (4,9)	0	0		1 (0,0)	~	~	0	0
Slovenia	r	81 (3,2)	520 (2,3)	18	(5,7)	●	16 (2,9)	529 (5,8)	-19	(5,4)	▼	2 (1,3)	~	~	2	(1,3)
United States		81 (2,8)	543 (4,1)	4	(4,5)		18 (3,1)	520 (6,1)	-5	(4,7)		2 (0,9)	~	~	1	(1,0)
England		81 (3,8)	543 (3,4)	-	-		19 (3,8)	537 (7,9)	-	-		0 (0,0)	~	~	-	-
Austria		80 (3,4)	541 (2,3)	0	0		20 (3,4)	531 (6,1)	0	0		0 (0,0)	~	~	0	0
Norway		79 (3,5)	500 (3,2)	12	(6,0)	●	21 (3,5)	491 (4,4)	-8	(5,9)		0 (0,0)	~	~	-4	(1,4)
Canada, Alberta		78 (3,6)	562 (2,6)	0	0		20 (3,4)	554 (6,4)	0	0		2 (1,2)	~	~	0	0
Canada, Ontario		76 (5,0)	556 (3,0)	14	(6,7)	●	20 (4,5)	548 (6,7)	-14	(6,2)	▼	4 (2,3)	562 (14,8)	0	(3,0)	
Canada, Nova Scotia		75 (3,5)	542 (2,7)	0	0		23 (3,5)	541 (4,5)	0	0		2 (1,1)	~	~	0	0
Singapore		73 (0,0)	560 (3,2)	1	(3,4)		12 (0,0)	553 (11,1)	-6	(2,9)	▼	15 (0,0)	555 (7,3)	5	(2,7)	
Canada, Quebec		73 (3,9)	537 (3,0)	-11	(5,4)	▼	24 (3,6)	526 (7,2)	8	(5,1)		3 (1,7)	520 (14,4)	3	(1,7)	
Poland		72 (4,0)	520 (2,9)	0	0		27 (4,0)	520 (4,2)	0	0		2 (1,0)	~	~	0	0
Germany		71 (3,2)	553 (2,4)	3	(4,6)		27 (3,2)	535 (4,5)	-4	(4,6)		1 (1,0)	~	~	1	(1,0)
Hungary		71 (4,4)	553 (4,0)	8	(5,7)		15 (3,2)	539 (6,3)	-13	(4,5)	▼	14 (3,0)	548 (7,7)	5	(3,9)	
Slovak Republic		65 (3,8)	532 (3,8)	34	(5,3)	●	33 (3,8)	530 (5,0)	-32	(5,3)	▼	2 (1,2)	~	~	-2	(2,0)
Spain		64 (4,3)	518 (2,9)	0	0		25 (3,7)	501 (7,3)	0	0		11 (2,7)	513 (9,0)	0	0	
France		60 (4,1)	526 (2,8)	-12	(6,3)		39 (4,1)	516 (4,0)	12	(6,3)		1 (0,0)	~	~	0	(0,0)
Italy		56 (4,2)	552 (4,1)	20	(5,5)	●	42 (4,2)	551 (4,2)	-16	(5,7)	▼	3 (1,5)	524 (18,9)	-4	(2,5)	
Lithuania		49 (4,5)	538 (2,6)	28	(5,6)	●	40 (4,1)	537 (3,0)	-25	(5,6)	▼	11 (2,8)	534 (6,7)	-3	(4,0)	
Latvia		49 (4,1)	544 (2,7)	-3	(5,7)		34 (3,9)	539 (5,0)	-7	(5,9)		17 (2,9)	540 (7,7)	9	(3,7)	●
Romania		48 (4,4)	509 (6,1)	19	(6,1)	●	40 (4,7)	469 (8,6)	-16	(6,4)	▼	12 (2,9)	473 (8,8)	-4	(4,4)	
Georgia		46 (4,3)	479 (5,5)	0	0		51 (4,2)	462 (4,4)	0	0		3 (1,6)	513 (23,0)	0	0	
Belgium (French)		42 (4,4)	504 (5,6)	0	0		52 (4,2)	500 (3,9)	0	0		6 (2,4)	480 (8,8)	0	0	
Indonesia		41 (4,2)	386 (6,1)	0	0		51 (4,0)	420 (5,5)	0	0		8 (2,4)	421 (9,1)	0	0	
Bulgaria		38 (4,6)	547 (8,1)	11	(5,9)		44 (4,9)	546 (6,1)	-4	(6,3)		18 (3,5)	548 (11,0)	-6	(4,7)	
Israel	r	37 (4,0)	532 (7,2)	26	(5,1)	●	40 (4,1)	507 (9,1)	-9	(6,2)		23 (3,4)	494 (11,6)	-17	(5,3)	▼
Chinese Taipei		30 (3,7)	537 (3,4)	0	0		35 (4,2)	535 (3,6)	0	0		34 (3,8)	535 (3,4)	0	0	
South Africa		26 (2,9)	350 (16,0)	0	0		51 (2,7)	299 (6,8)	0	0		23 (2,4)	257 (9,1)	0	0	
Macedonia, Rep. of	r	17 (3,2)	424 (13,1)	-24	(5,4)	▼	67 (4,1)	447 (6,5)	18	(6,0)	●	16 (3,3)	465 (19,9)	6	(4,1)	
Qatar	r	16 (0,2)	345 (3,3)	0	0		39 (0,2)	346 (1,8)	0	0		46 (0,2)	358 (1,8)	0	0	
Trinidad and Tobago		15 (3,3)	454 (9,0)	0	0		67 (4,0)	431 (6,1)	0	0		18 (3,3)	443 (18,0)	0	0	
Russian Federation		14 (2,7)	582 (6,0)	-9	(3,4)	▼	22 (2,2)	560 (7,0)	-19	(4,4)	▼	64 (3,5)	562 (3,8)	27	(5,1)	●
Moldova, Rep. of		12 (2,8)	517 (8,0)	6	(4,0)		65 (3,9)	496 (3,8)	15	(6,2)	●	24 (3,5)	502 (6,6)	-21	(6,1)	▼
Iran, Islamic Rep. of		9 (1,8)	474 (9,7)	3	(2,3)		46 (3,4)	422 (4,6)	3	(5,9)		45 (3,5)	408 (5,8)	-6	(6,0)	
Kuwait		7 (1,9)	343 (12,3)	0	0		43 (4,8)	327 (6,8)	0	0		51 (4,7)	329 (6,6)	0	0	
Morocco	r	5 (2,0)	354 (14,4)	-56	(5,5)	▼	20 (4,6)	318 (22,9)	-5	(7,1)		75 (4,9)	326 (8,0)	61	(6,7)	●
Hong Kong SAR		4 (1,6)	564 (11,9)	1	(2,1)		56 (4,1)	565 (3,0)	-12	(5,8)	▼	40 (4,2)	562 (3,9)	11	(6,0)	
Luxembourg <sup>1</sup>		-	-	-	-		-	-	-	-		-	-	-	-	
International Avg.		52 (0,5)	505 (1,0)				32 (0,6)	496 (1,1)				15 (0,4)	476 (2,2)			

Based on principals' responses to how much the school's capacity to provide instruction is affected by a shortage or inadequacy of the following: qualified teaching staff, teachers with a specialization in reading, second language teachers, instructional materials, supplies (e.g., paper, pencils), school buildings and grounds, heating/cooling and lighting systems, instructional space (e.g., classrooms), special equipment for physically disabled students, computers for instructional purposes, computer software for instructional purposes, computer support staff, library books, and audio-visual resources. Average is computed on a 4-point scale: A lot=1, Some=2, A little=3, and Not at all=4. Responses for each activity were averaged across each principal. High level indicates an average of greater than 3 through 4. Medium level indicates an average of 2 through 3. Low level indicates an average of 1 to less than 2. "Second language teachers" was added to the PIRLS 2006 index, and is not included in the 2001 index calculations. "Teachers with a specialization in reading" was worded as "teachers qualified to teach reading" in 2001.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (-) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

1 Primary schools in Luxembourg do not have principals.

● Percent in 2006 significantly higher.

▼ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

## Computer Usage in Schools

### ***Hungarian Schools Do Not Generally Use Computers Available to Improve the Students' Reading Literacy Abilities***

Computer usage plays an increasingly important role in education, and in the improvement of the reading literacy abilities, therefore a special emphasis was placed on assessing computer availability in schools and instructional use in classes along with availability of resources in general.

From the teachers' responses we get to know whether the assessed classes have access to computers at school, whether there is internet on the available computers and also how often the teacher sets tasks for students where they need to read tales or texts on the computer or use educational software to improve their reading abilities.

Based on the teachers' responses, 65% of the students, on an international level, go to schools where there are computers available to the 4th-grade students and a computer with internet access is available to the majority (57%) of the students. Spreading of technical equipment can be easily observed in the fact that in two thirds of the countries that participated also in PIRLS 2001 the computer and internet availability increased, the greatest increase was in Slovakia (with 70 and 80 %) and Bulgaria (with 53 and 45%). Only a bit more than half (52%) of the Hungarian students go to a school where they can use computers in class and 49% of them can work on a computer with internet access.

When looking at the computer availability we also need to take into account the extent to which the teachers may be used computers for instructional purposes, for improving reading literacy abilities. We asked the teachers how often they set tasks for students where they need to read tales or texts on the computer or use educational software to improve their reading strategies and reading literacy abilities. The second part of exhibit 23 displays the percentage of students whose teachers use computers for such activities at least once a month.

Teachers asks 39% of the 4th-grade students (on average internationally) at least once a month to read stories or texts on the computer, and 30% to use instructional software. In Hungary, only 22% and 12% of students go to such a school. These are still only about half of the international average, even though both percentages have significantly improved since 2001 (reading on computers with 19%, instructional software use with 8%). Looking at it from the aspect of reading on computers and using instructional software, Hungary is among the countries where computer facilities are used the least often to develop the students' reading skills. Among the countries which are ahead of Hungary or on the same level on the reading achievement scale the two above mentioned methods are used to educate proportionally more, except Russia, or, even twice as many students, except Luxembourg.

Looking at the ratio of the schools' IT-infrastructure and the students using computers in order to facilitate learning to read, we can see that the resources in Hungarian schools are not fully utilized to develop the students' reading skills. For example, in Romanian schools with weaker IT-structure, a higher percentage of students use computers to develop reading skills than in our schools. The low computer use of the 4th-grade students can cause problems later on in life, since the use of computers is so widespread and it is also necessary to get on with daily life; computer usage and the understanding of computerized texts is needed more and more in order to have better jobs and reach higher living standards.

Computer availability in Hungarian schools, in general, is consistent with the international average, and, based on the principals' responses, the schools' financial resources are sufficient for instruction in most of the cases. The trend in our country towards a smaller class-size can also be found in other



Central European countries, although the student-teacher ratio is especially low in Hungary. Finally, computer usage also stays behind the Western as well as Central European countries, although the situation has improved significantly compared to 2001.

Exhibit 23: Computer Availability and Instructional Use with Trends

Countries	Percentage of Students in Schools with Computers for Students' Use				Percentage of Students in Schools with Computers Having Internet Access				Percentage of Students Whose Teachers Reported Instructional Uses at Least Monthly							
									Students Use Instructional Software to Develop Reading Skills and Strategies				Students Read Stories or Other Texts on the Computer			
	2006	Difference in Percent From 2001			2006	Difference in Percent From 2001			2006	Difference in Percent From 2001			2006	Difference in Percent From 2001		
Austria	90	(2,3)	0	0	62	(3,1)	0	0	66	(3,9)	0	0	60	(3,5)	0	0
Belgium (Flemish)	99	(0,5)	0	0	91	(2,5)	0	0	38	(3,7)	0	0	38	(3,5)	0	0
Belgium (French)	58	(3,4)	0	0	46	(3,8)	0	0	17	(2,5)	0	0	14	(2,2)	0	0
Bulgaria	72	(3,6)	53	(4,7)	52	(3,7)	45	(4,3)	28	(3,5)	25	(3,8)	56	(4,2)	50	(4,6)
Canada, Alberta	99	(0,8)	0	0	99	(0,8)	0	0	44	(4,1)	0	0	72	(3,5)	0	0
Canada, British Columbia	r 94	(2,3)	0	0	r 93	(2,2)	0	0	r 35	(4,2)	0	0	r 51	(4,3)	0	0
Canada, Nova Scotia	100	(0,3)	0	0	99	(0,6)	0	0	42	(3,9)	0	0	67	(3,5)	0	0
Canada, Ontario	98	(1,0)	0	(1,5)	98	(1,0)	5	(2,2)	46	(5,3)	-4	(6,8)	65	(4,0)	3	(5,9)
Canada, Quebec	92	(2,6)	-3	(3,4)	92	(2,6)	0	(3,7)	22	(3,6)	-5	(5,3)	58	(4,5)	2	(6,3)
Chinese Taipei	86	(3,0)	0	0	82	(3,3)	0	0	41	(4,3)	0	0	52	(4,4)	0	0
Denmark	91	(2,0)	0	0	91	(2,0)	0	0	29	(3,6)	0	0	63	(3,9)	0	0
England	98	(1,1)	-1	(1,6)	98	(1,1)	12	(3,5)	53	(4,2)	-1	(6,3)	75	(4,0)	19	(6,2)
France	93	(2,0)	10	(4,1)	84	(3,0)	33	(5,7)	28	(3,2)	-1	(4,9)	39	(3,8)	9	(5,4)
Georgia	10	(2,4)	0	0	3	(1,4)	0	0	1	(0,7)	0	0	4	(1,4)	0	0
Germany	85	(2,8)	24	(4,1)	65	(3,7)	38	(4,7)	48	(3,5)	16	(4,8)	50	(3,1)	24	(4,3)
Hong Kong SAR	93	(1,8)	13	(4,6)	90	(2,1)	18	(5,0)	68	(3,8)	40	(5,5)	76	(3,3)	45	(5,3)
Hungary	52	(4,0)	13	(6,2)	49	(4,0)	23	(5,6)	12	(2,7)	8	(3,1)	22	(3,5)	19	(3,8)
Iceland	93	(0,2)	1	(0,3)	93	(0,2)	6	(0,4)	51	(0,4)	-2	(0,5)	60	(0,4)	16	(0,5)
Indonesia	14	(2,9)	0	0	2	(1,0)	0	0	6	(2,1)	0	0	5	(2,0)	0	0
Iran, Islamic Rep. of	5	(1,7)	4	(1,9)	1	(0,8)	1	(0,8)	2	(0,9)	2	(0,9)	2	(0,9)	2	(0,9)
Israel	26	(3,8)	-23	(5,1)	23	(3,6)	-10	(5,2)	11	(2,6)	-14	(4,8)	21	(3,4)	-11	(5,4)
Italy	80	(3,0)	17	(4,4)	60	(3,4)	23	(5,1)	28	(3,7)	8	(4,8)	44	(4,0)	25	(4,9)
Kuwait	15	(2,5)	0	0	6	(1,9)	0	0	8	(2,2)	0	0	9	(2,5)	0	0
Latvia	54	(3,8)	16	(5,4)	49	(3,8)	22	(5,2)	14	(2,7)	8	(3,3)	24	(3,1)	16	(3,9)
Lithuania	57	(3,8)	33	(5,3)	51	(4,0)	36	(5,2)	21	(3,1)	17	(3,5)	34	(3,8)	26	(4,5)
Luxembourg	89	(0,1)	0	0	79	(0,1)	0	0	19	(0,1)	0	0	40	(0,2)	0	0
Macedonia, Rep. of	19	(3,2)	4	(4,5)	14	(3,0)	12	(3,2)	5	(1,7)	0	(2,4)	7	(2,0)	3	(2,6)
Moldova, Rep. of	r 19	(2,7)	4	(3,9)	r 11	(2,4)	11	(2,4)	r 4	(1,8)	4	(1,9)	r 6	(2,0)	4	(2,4)
Morocco	11	(2,1)	-13	(5,1)	4	(1,3)	3	(1,3)	3	(1,4)	2	(1,7)	6	(1,8)	5	(2,0)
Netherlands	97	(1,5)	0	(2,5)	95	(2,4)	48	(5,2)	52	(4,5)	24	(6,1)	64	(4,3)	39	(5,8)
New Zealand	97	(1,0)	-2	(1,1)	95	(1,4)	4	(3,1)	44	(2,9)	0	(5,3)	65	(2,7)	5	(5,3)
Norway	91	(2,8)	5	(4,3)	88	(3,1)	16	(5,3)	61	(4,4)	14	(5,9)	51	(4,8)	24	(6,1)
Poland	68	(4,0)	0	0	63	(4,1)	0	0	19	(2,9)	0	0	36	(4,1)	0	0
Qatar	s 59	(0,3)	0	0	s 25	(0,2)	0	0	s 38	(0,3)	0	0	s 32	(0,2)	0	0
Romania	46	(3,3)	21	(5,2)	30	(4,1)	25	(4,5)	17	(3,4)	11	(3,9)	26	(3,3)	16	(4,2)
Russian Federation	29	(3,0)	20	(3,7)	19	(2,6)	18	(2,6)	14	(2,6)	12	(2,8)	24	(2,6)	20	(2,9)
Scotland	98	(1,3)	0	(1,9)	97	(1,5)	37	(4,2)	47	(4,6)	-2	(6,7)	67	(4,2)	10	(6,5)
Singapore	93	(1,4)	2	(2,7)	93	(1,5)	15	(3,3)	60	(3,2)	4	(5,2)	79	(2,2)	12	(4,0)
Slovak Republic	86	(2,6)	70	(4,0)	85	(2,8)	80	(3,3)	30	(3,9)	29	(3,9)	56	(4,2)	53	(4,4)
Slovenia	90	(1,7)	23	(4,2)	85	(2,1)	21	(4,5)	38	(3,1)	10	(4,8)	53	(3,6)	19	(5,2)
South Africa	23	(2,4)	0	0	11	(1,7)	0	0	12	(1,7)	0	0	12	(1,8)	0	0
Spain	78	(3,0)	0	0	69	(3,2)	0	0	50	(4,2)	0	0	43	(3,7)	0	0
Sweden	96	(1,7)	-3	(1,8)	95	(1,9)	2	(2,5)	35	(3,7)	-13	(5,0)	50	(4,0)	4	(4,8)
Trinidad and Tobago	55	(4,0)	0	0	24	(3,5)	0	0	29	(3,4)	0	0	29	(3,7)	0	0
United States	98	(0,8)	0	(1,4)	97	(1,1)	5	(2,1)	56	(3,6)	-10	(5,5)	68	(3,7)	8	(5,6)
International Avg.	65	(0,4)			57	(0,4)			30	(0,5)			39	(0,5)		

Background data provided by teachers.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students. An "s" indicates data are available for 50-69% of the students. An "x" indicates data are available for less than 50% of the students.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

● Percent in 2006 significantly higher.

◐ Percent in 2006 significantly lower.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006.

## Conclusion

The PIRLS assessment is a useful tool in the hands of the educational authorities which – when interpreted in the right way, used well and cautiously – can serve as an establishment to improve the Hungarian education system. Education policy based on facts and evidence – using also other international students' achievement studies similar to the PIRLS assessment – can help to make our educational system even more effective, fair and efficient.

The results of the PIRLS 2006 assessment point out that the reading literacy of the 4<sup>th</sup>-grade Hungarian students are positively good on an international level, our country is among the top-performing ones in all of the achievement statistics. An outstanding percentage of our students reached every international benchmark, and only 3% of our students did not meet the requirements of the low benchmark. It is also very positive that although their parents read less, the students themselves picked up books for their own entertainment more often in 2006 than in 2001, and quite often the percentage of the readers is high even on an international level.

Nevertheless, the results of the assessment contain not only positive feedback for us: the 4<sup>th</sup>-grade students' attitude towards reading is only average, and their self-concept in reading does not reflect the outstanding results either. Also, PIRLS' findings demonstrate the defining role of the family background.

These international studies are indispensably important for every education system, because they can examine themselves not only within their own framework but also compared to external reference points. It is their whether they use the results and whether they use them wisely.





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„... a literate citizenry is vital to a nation's social growth and economic prosperity. To help countries make informed decisions about reading education, IEA's Progress in International Reading Literacy Study (PIRLS) provides internationally comparative data about students' reading achievement in the 4th-grade of primary school.”

„The results of the PIRLS 2006 assessment point out that the reading literacy of the 4th-grade Hungarian students is positively good on an international level, our country is among the top-performing ones in all of the achievement statistics.”

„It is also very positive that though the Hungarian students' parents read less, the students themselves picked up books for their own entertainment more in 2006 than in 2001, and quite often the percentage of the readers can said to be high also on an international level.”